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CAMERA CRAFT

San Francisco, California

M.S. MOYT PHOTO

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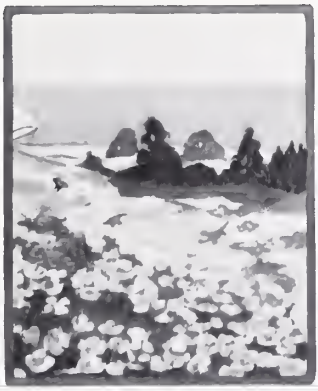

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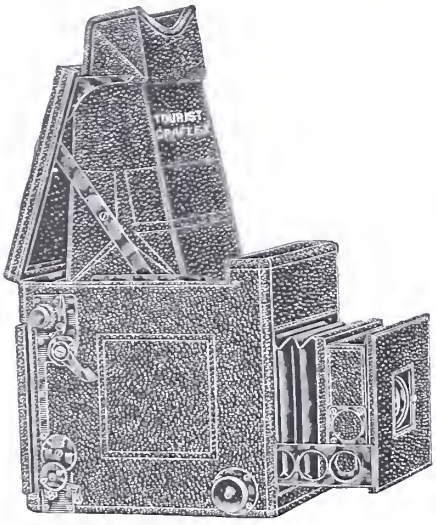

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by WILL H. WALKER
PORTLAND, ORE.

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

VOL. X. SAN FRANCISCO, CALIFORNIA, JANUARY, 1905 NO. 1

Solar Printing

By BERNARD C. ROLOFF

Pursuant to repeated requests and numerous questions upon the subject of Solar Printing and Solar Enlarging from various sources, I give the following description of an apparatus which is eminently fitted for this work and can be built at a nominal expense by any amateur. This device should also attract those interested in a home-made enlarging apparatus for daylight use, to which it can be readily adapted with but few changes.

In order to make the title clear to those who do not understand the term; by solar printing is understood a somewhat obsolete, yet extremely fascinating process or method of obtaining enlargements directly upon some form of printing-out paper from a negative by projecting the direct rays of the sun through the latter. In the old days these enlargements were made upon home sensitized, plain, salted, or albumen papers, while at the present time we have papers like Solio, Aristo, Platinum, Self-Toning and others which very readily lend themselves to the process.

To come without further preface to the apparatus employed in the process: In solar-printing establishments, large, entirely enclosed cameras were used which were placed on the roof or upper story of a building where it was possible, by swinging the entire apparatus, to follow the sun despite its diurnal motion. These solar cameras, as they were termed, were adapted to follow the sun across the heavens by means of what is known as a heliostat. Such a device, while quite feasible, would be a little beyond the means of most amateurs, so I have evolved the device shown in the accompanying sketches, which will serve the purpose as well and can be placed in an ordinary window, which must, however, necessarily have a southern exposure.

Referring to Figure 2 of the sketches, A represents a strong frame of one-inch wood that will exactly fit the lower half of the window when the sash is thrown up; and in the middle of this is fitted an upright board B about two feet wide which should have a hole cut in its center ten inches square. The size of this hole is regulated by the outside dimensions of your camera. I have taken as an example, the most common camera in use, viz: an ordinary 5 x 7 reversible back Premo or Poco, the back of which measures from eight and three quarters to nine

inches, square. For other cameras it is only necessary to make this opening smaller and the rest will follow. Fasten this center board strongly in place with nails or screws driven well into the wood. The open spaces C are to be closed by several thicknesses of brown paper pasted or tacked across the inside of the frame. The upper part of the window must also be closed, so that no ray of light shall enter the room except through the hole in B. At this point it may be well to advise that a part of the work consists in cutting a number of circular holes, therefore a scroll-saw will be found very useful. However, the boards having circular holes may be ordered from any saw or planing mill, already cut, at a nominal price. The slot K in board B, Figure 1, should be cut with a scroll-saw.

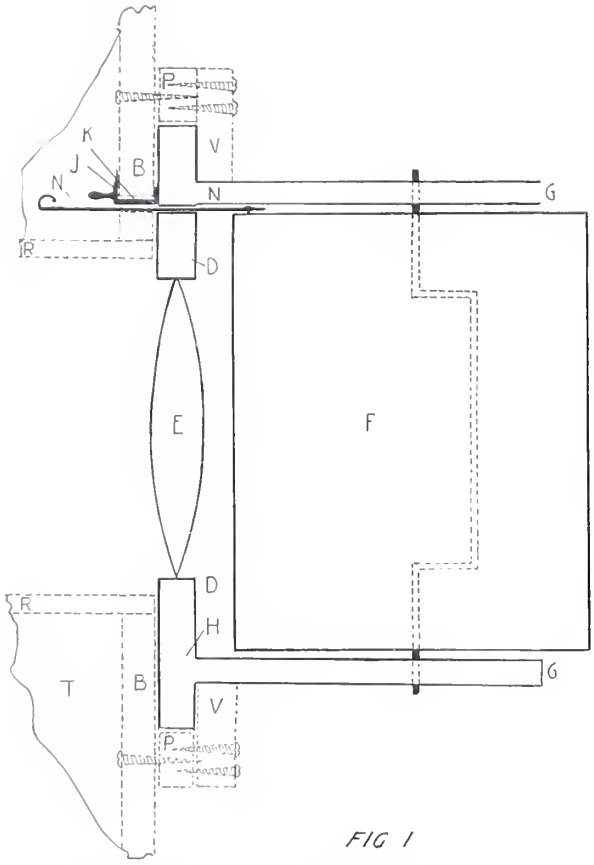


FIG 1

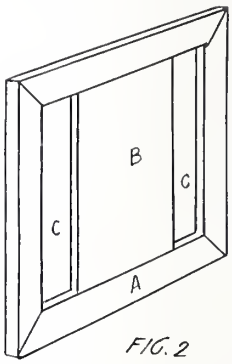


FIG. 2

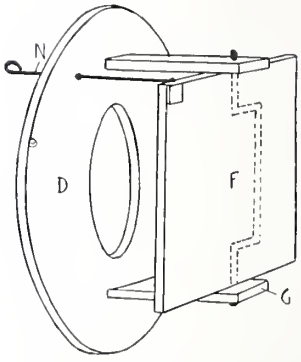


FIG 3

In Figure 3 we have a disk of one-inch wood seventeen inches in diameter, with an opening in the center eight inches across, to hold the condensing lens. F is a mirror eight inches wide and twelve inches long, turning on an axis which passes through the supports G, G; the latter being attached to the disk D as best shown in Figure 1. These supports should be long enough to admit of the mirror turning entirely around without touching the disk, and are fastened in place by screws passing through the disk and into their ends. It may be better to gouge out two square holes in the disk as shown at H, H, Figure 4, into which the supports are forced, to enable them to bear better the weight of the mirror. The manner of attaching the pivots to the mirror is as follows: The back is first covered with paper to prevent it being scratched, then a piece of wire is bent and laid

in place as shown in Figures 1 and 3, and lastly, a piece of very strong paper is pasted over the wire and entire back, and caught down over the edge in front forming a narrow frame to the glass. The ends of the wire should pass through rather small holes in the supports G, G, so that it will not easily turn out of position. If possible, I should advise buying a small mirror in a wooden frame (the size not being of importance, except that it be large enough), and the work of pivoting the same between the supports will then become an easy matter.

A handle must be provided on the inside of the disk to permit of operating the same from inside the room. This may consist of a piece of heavy brass, at least an eighth of an inch thick and of the shape shown at J, Figure 1. A small recess may be cut into the disk D at this point so that the inner bent portion of the brass handle may lie flush with the surface of the disk and one or more screws should be run through the brass into the disk to hold it in place. Though not shown, one screw may be run into the upper support G. This handle J is run through a slot K cut in the board B, on an arc of a circle twelve and one-half inches in diameter before being bent to shape. It is then bent up to form an indicator as shown in Figures 1 and 4, and may be doubled back to form a handle as shown. A graduated scale L, Figure 1 may be marked on board D, if desired, so that the mirror can be returned to a certain position at any time. At one corner of the mirror M, Figures 1 and 3, a small block of wood about an inch and a half long and half an inch thick should be securely glued. If a wood-framed mirror is used this block may be dispensed with for obvious reasons. A wire handle N is bent at this end so as to hold a small screw O by which the wire is pivoted to the block. This wire is then also run through the slot K and bent at its outer end to form a handle by which the mirror may be moved on its pivots. Thus we have the mirror moving in two directions which enables us to follow the course of the sun and throw a direct beam of sunlight through the condensing lens onto the negative.

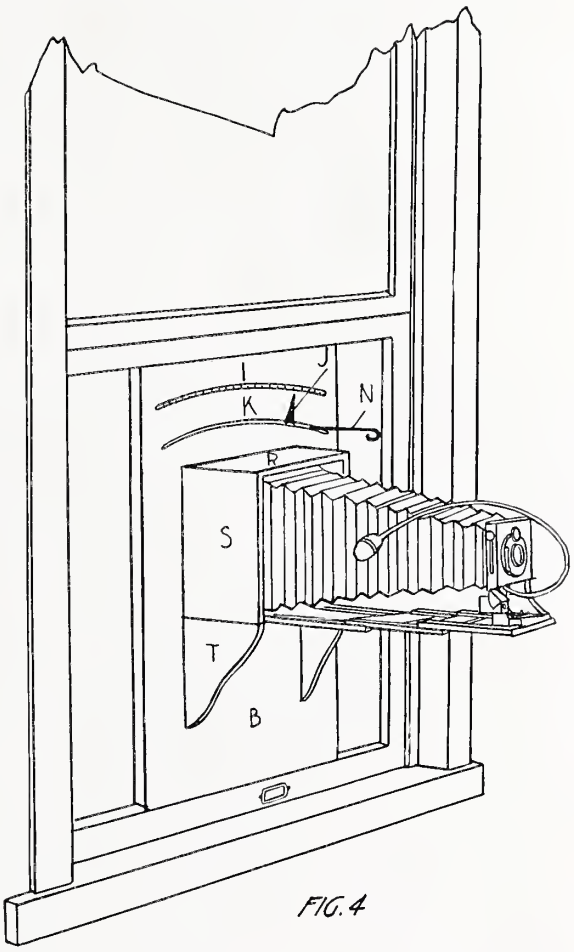
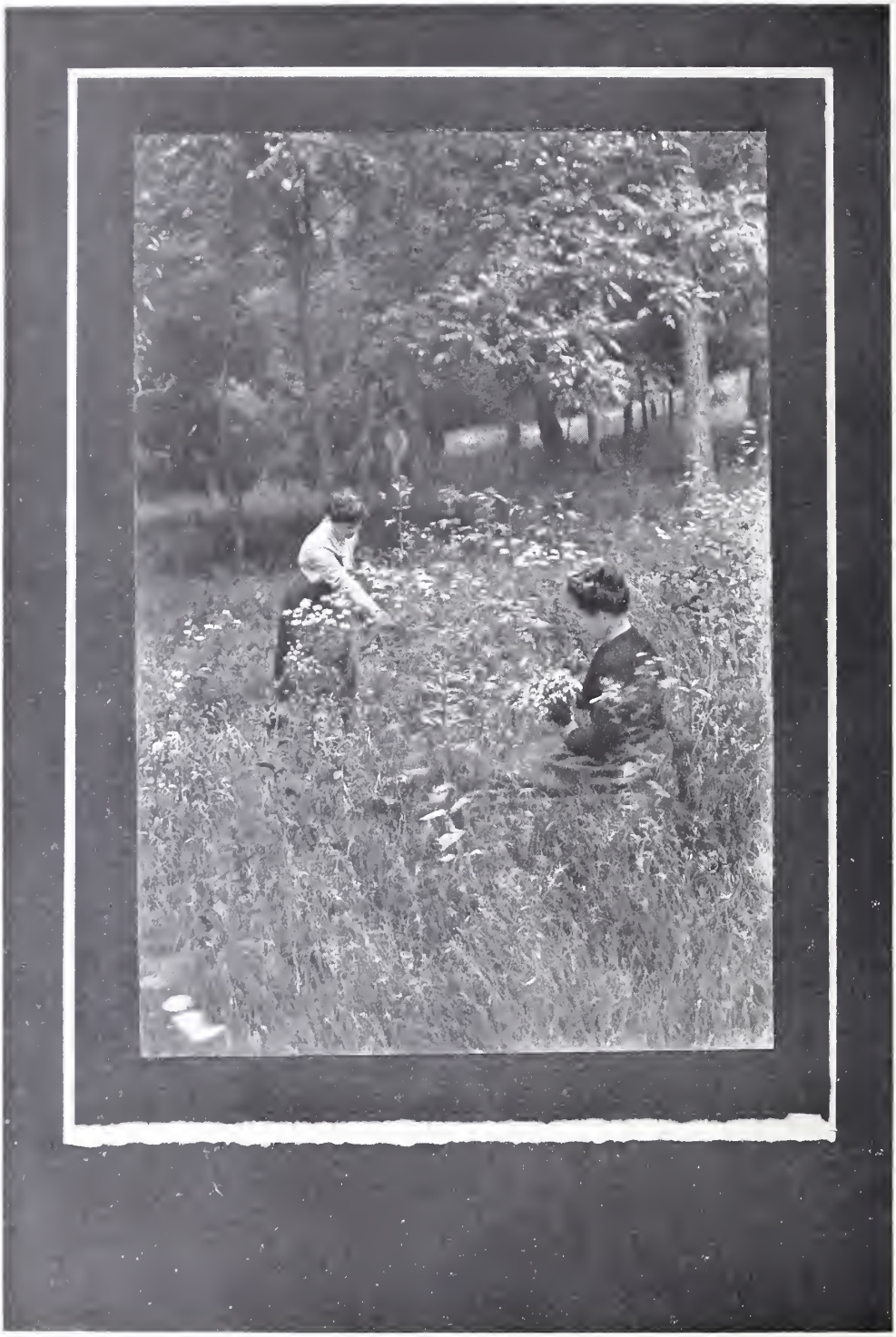


FIG. 4

Next take two pieces of wood one inch thick, and twenty inches square; in the center of one cut a hole seventeen inches in diameter, while in the other cut a



GATHERING WILD FLOWERS

BY LOUIS FLECKENSTEIN

hole only fourteen inches in diameter. These pieces are shown in Figure 1, P and V respectively. Now, referring to Figure 1 which is a section of the instrument, B is the central board which has the square hole in it; P is the piece you have just made with the hole seventeen inches in diameter and V the other piece with the hole fourteen inches in diameter. D is the large disk shown in Figure 3 which you remember is just seventeen inches in diameter and consequently will exactly fit the opening in P. If these edges are rough, sandpaper them with a coarse quality of sandpaper first, finishing them off with a finer kind. When D is in position and moves easily, but not too loosely, in P, place V over it and fasten it in place with screws passing through Q into P, but P must, of course, be first strongly screwed upon the board B.

You will now see, that by turning the handle or indicator J, the position of the mirror which is fastened to this disk can be easily changed so that it shall face in any direction, while by drawing the wire N it can be swung so as to reflect the sun's rays through the lens from whatever quarter of the heavens it may be shining. This double adjustment of mirror and lens enables you to throw the rays of the sun through the opening, in upon the negative, at any hour of the day. As the mirror is adjusted in Figure 1 the sun must be very low, as its rays to strike the mirror would necessarily be nearly horizontal. The condensing lens should be an eight-inch convex lens of about twelve-inch focus. It will cost about $5.00 new but can be had a great deal cheaper from second-hand stores. This size will cover enough of a 5 x 7 plate to be very serviceable, for a 4 x 5 a six-inch lens of ten-inch focus would do very well. The outer end of the instrument being now completed, we will turn our attention to the inner part. Cut two half-inch boards to a size of about 10 x 7 inches. These are shown at R, R, in Figures 1 and 4. Also cut two similar boards of the same length but nine inches wide, shown at S. S. Figure 4. This forms the inside housing for the camera when screwed, glued, or nailed in place. A pair of brackets T, T, should be placed under the housing to support the same more securely when a heavy camera is being held in position.

The instrument is now completed and to use it it is only necessary to place a camera in the housing, being careful to see that no light creeps through alongside the camera. It may be well to glue a narrow strip of velvet plush, or like material, on the inside of the housing all around, both to prevent this escape of light and protect the leather covering of the camera from injury when moving it in and out of the housing. The old rule for solar enlarging was, that the lens of the camera, that is, the projecting lens, should be at the principal focal point of the condenser. If this be twelve inches then the camera lens should be racked out until it is just this distance from the condensing lens. For this reason the lens in old forms of boxes used to be fixed in place, and arrangements made to move the negative back and forth between the projecting and condensing lens. However, the arrangement given herewith allows of movement of both projecting lens and negative, as the reversible back of the camera should be removed and the negative placed at this point and held in place with thumb-tacks or other means. An easel or stand should be provided upon which the sensitive paper can be pinned and this should be made so that it can be easily moved back and forth to get the proper size of enlargement. For this purpose I have found that a bench or a cheap pine kitchen table will answer. Upon this I have a shallow dry

goods box sliding in grooves, made by nailing cleats on the table top. I have my table exactly parallel with the camera and so avoid getting one side of the picture sharp while the other side is out of focus, as often happens when an easel is used to hold the sensitive paper.

It is thought that the manipulation of the device is now thoroughly understood, so a few words as to handling the paper will not come amiss. With such paper as Solio attached to the screen, the image gradually appears, and it requires time, which may extend from fifteen minutes to an hour or more, to reach full strength. Meanwhile, the mirror must be regulated from time to time as the sun declines to the horizon to keep the direct rays always shining through the lens. This slow printing, requiring as it does incessant attention to keep the apparatus duly placed as respects the sun, is very objectionable and annoying, and therefore leads to the extensive use of development to shorten the time. As to development of Solio and Aristo papers, this is very simple. Make a solution of metol, thirty grains; citric acid, sixty grains, and water ten ounces. Print until the image is just visible and develop with the above and very fine results will be obtained. Before immersing the sheet in this developer, a few small strips of any printing-out paper should be placed in the solution, as it works best after a little free silver has entered it. It develops slowly at first until the print is of fair strength, when it gains rapidly. The prints should be very quickly and thoroughly washed after development and may be toned or simply fixed, beautiful tones resulting in either case. Many other formulæ for developing printing-out paper have been given in the photographic magazines from time to time, so it is not necessary to go any deeper into that part of the operation at this time.

The advantage of making enlargements by this process is that to some amateurs the seeming difficulties of enlarging on Bromide paper, with its extreme sensitiveness and consequent careful handling, is a great drawback. With this method they are handling papers with which nearly all amateurs are familiar, although used in a new manner, while at the same time the exposure is not a guess but its completion may be easily determined. Another way of using printing-out paper for daylight enlarging and then developing it, is to first soak the paper in a ten per cent solution of bromide of potassium for a few minutes and then wash it for a further fifteen minutes. This converts the sensitive salts into bromide of silver, making it more sensitive. While the same developer is used as for Bromide paper, the exposure will be found about five times as long as with the ready prepared Bromide papers. In order to prepare the above apparatus for regular bromide enlarging it is only necessary to remove the mirror, and in its place put a sheet of white bristol-board which is kept fixed at an inclination of forty-five degrees to the camera so as to use unobstructed light from the sky, but at the same time avoiding all direct sunlight. The camera should be pushed back so that the negative comes within half an inch of the condensing lens.

In a later issue a description of a solar microscopic attachment for this device, by the aid of which microscopic objects of the usual type may be enlarged directly upon sensitive plates or printing-out paper, will be given. In this connection it may be well to state that the device may also be transformed into a magic lantern using solar light as the illuminant. Any one of ordinary ability can easily make this device, but if successful results are not forthcoming, the Author will cheerfully answer inquiries sent him in care of the Editor.

DECEMBER

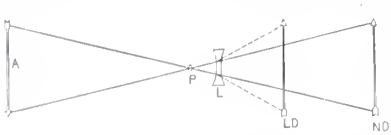
BY THOMAS A. MORGAN

Telephotography with a Pinhole

By Dr. H. D'Arcy Power

MADE WITH PINHOLE AND MINUS LENS

To take a photograph with an apparatus in which the only lens employed is a minus one may at first sight appear an impossibility, but the accompanying illustrations demonstrate the opposite. It is now some two years since I described in Camera Craft my method of timing stenopaic exposures, and in the same series of papers laid stress on the special applicability of the pinhole to work of large size. Experience has amply confirmed what I then wrote in both particulars, and so far as exposure is concerned my stenopaic negatives show more uniformly correct timing than my lens work. In the matter of large negatives I have met with a difficulty that has given me much trouble, and to which I am now able to offer a solution. It is this: If a narrow angle view (and most pictorial work is of this class) be taken on a large plate, say 14x11, it involves a long extension of a large camera and a proportionately long exposure. On a woodland subject this might be half an hour or more. The question of time is merely one of personal convenience, and to the serious worker is not of consequence; but a large camera extended 20 or 30 inches is liable to movement in various ways, both by tremor and displacement; and more than once I have suffered the annoyance of losing a large plate, a morning's work and an opportunity in this manner. Could I obtain the same size and angle at half the bellow's extension the probability of movement would practically disappear. I have little special knowledge of optics, but it occurred to me that if the image formed by a pinhole were passed through a minus lens the rays would necessarily suffer outward deflection and the image be correspondingly enlarged without extension of the camera or would attain the same at a less extension. The idea is illustrated by the accompanying drawing where the image of the arrow A projected through the pinhole P would normally form a picture of the same size as the object at ND, but which after traversing the concave lens L undergoes such outward refraction as to form an image of the same size as the object at half the distance, as at LD. Necessarily the outward displacement and consequent magnification would depend on the strength of the minus glass and its position in relation to the pinhole. This I presume could

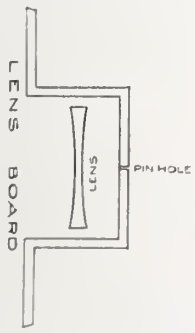


MADE WITH PINHOLE ONLY

all be calculated, but I prefer to determine it by experiment. I put a contact transparency of a negative of myself in my daylight enlarging apparatus and substituted my set of pinholes for the lens. Using No. 1 pinhole, which is one millimeter in diameter, I got a well-defined image measuring from the hair-line to point of shirt-front 4 inches. Now placing a ten diopter minus lens half an inch behind the pinhole the image on the screen immediately increased in size to 5 inches; on moving the lens farther back the image grew in size to seven and a half inches; beyond this I could not go as the shadow of the lens was thrown across the image and spoiled it. I then tried stronger lenses with the result shown in the following table:

Strength of lens	Size of pinhole image 4 inches	Size of pinhole image and lens ½ inch behind hole	Size of pinhole image and lens 2 inches behind hole
10 D	4 inches	5 inches	7½ inches
16 D	4 "	5¼ "	8¼ "
20 D	4 "	6 "	10 "

To bring the matter to a practical test I put a Seed's No. 26 plate on the easel and gave 10 seconds' exposure, using a No. 3 pinhole (0.5 mm.). I then made another exposure with the 10 diopter lens one inch behind the hole, giving 40 seconds' exposure. A second experiment was made with a No. 4 pinhole (0.37 mm.) at exposures of 20 and 80 seconds. Prints from these negatives are enclosed and except for the sharper definition of the one made with the smaller pinhole they are alike and demonstrate that by placing a minus lens behind a pinhole the image may be magnified without altering the length of the bellows. In other words, the principles of telephotography are applicable to the pinhole as well as the lens. In my experiments I used an ordinary spectacle lens, and I noticed (what is not apparent in the enlarged head) that the image on the edges of the transparency plates showed inward curving, in fact the usual pincushioning distortion of a single lens. This could doubtless be corrected in the usual manner, if found undesirable. To make practical use of this telephotic power in the field demands a contrivance whereby the minus lens can be moved behind the pinhole. I would suggest the use of an ordinary telephoto mount; the barrel being short and the minus lens so arranged as to be capable of being adjusted at any distance ranging from immediately behind to two inches in the rear of the pinhole. This with a 16 D lens would double the size of the image. Any one desiring a more simple, but not so convenient an arrangement can mount the lens in a slot at the bottom of a small box having the pinhole in front and opening into the lens board behind as suggested by the accompanying illustration.



I shall experiment further along the lines here laid down and expect to have more to say at some future time. Evidently we have here not only an optical novelty but a means of increasing the efficiency of the pinhole in narrow angle work. The method does not seem to offer any gain in illumination, but the gain in stability is both great and important.

From exhibit of
E. W. MOORE, Portland, Ore.,
Fourth P. N. W. Convention.

The Scientific Basis of Artistic Mounting

By John Bartlett

Why do we mount and frame our photographic pictures? Why are we loath to send them forth to the exhibition shorn of their artistic card-setting? Why do we "grunt and sweat under a weary life" to match some appropriate tint to the prevailing tone of the print? Is it merely to isolate the picture from its surroundings? Is the only service of the mount and frame a negative one, not to interfere with the effect *per se* of the picture?

I think a little reflection will convince you that there is no neutral ground in the action of accessories, and I may venture to say, without encountering contradiction, that if the mount and frame do not enhance the good qualities of the photograph, they do positive injury by their incongruous presence. Prevailing fashion is apt to control taste, and a particular variety of mount, in itself modest and unassuming or even charming, is made to do service for all kinds and conditions of prints, where its modesty becomes at times too self-asserting or its charm too predominant, so that the beauty of the photograph is eclipsed or its excellence marred or totally nullified.

It is an excellent thing to have intuitive taste in selection, and comforting when in doubt to refer to it; but it would be more edifying to us who have not the inborn talent could the possessors give some reason for the faith which is within them, to guide in the valley of indecision. While the artist, who busies himself in the choice of a mount may abandon himself with tolerable success to his individual feeling in the treatment of color, it is safer to know the laws of the phenomena of contrast of color. It is a shorter path to the goal and will lessen the trials on the road. No attempt, as far as I know, has hitherto been made to apply practically the theory of color to the selection of appropriate mount.

While I am sensible of my inability to pass judgment in any particular case, or to gainsay the judgment of those who have established the canons of taste, I am nevertheless fully convinced that the discovery of some of my own errors, though made too late to be of much benefit to myself, may possibly be of use to those whose habits are not so formed but that they may be abandoned if proved to be wrong. Every one knows of what value to the painter is the knowledge of simultaneous contrast of color. To the photographer it is almost as important. He too must know the effect produced by the juxtaposition of light and shade, in order to produce certain esthetic effects.

Let us, at the start, acquaint ourselves with the simplest experiments bearing on the subject:

EXPERIMENT I

Lay a small white disk, say a white wafer upon a black ground, look steadily at it for fifteen seconds or more and then turn your eyes to another surface which is gray in color and uniformly illuminated; you will notice on the gray background a dark image of the form and size of the white wafer.

EXPERIMENT II

Now in place of a white wafer substitute a colored one, impress its image on your vision and then transfer your view to the gray ground; you will see an image but differently colored from the original. Its color will be what is called the complementary of the original. If the original be red the after-image will be bluish green. If it be yellow the after-image will be blue and so on for other colors.

EXPERIMENT III

If after having fixed your eye upon an object for a sufficient length of time you look upon a surface of the same color as the object the after-image will appear faint and whitish.

EXPERIMENT IV

If the surface looked upon is of the complementary color to that of the object the after-image will appear deeper and more brilliant than the rest of the surface.

We are not treating the topic psychologically and shall not enter into a discussion of the reason why, but shall confine our remarks to the practical application of the principle. Bright and full colors, positive colors (like ultramarine or scarlet) are seldom if ever made use of in photographic mounting, and consequently the successive contrast plays but a subordinate part. The examples are however well fitted to serve as an introduction to the study for our particular purpose here. The contrast between "light" and "dark," which being the simplest case (Experiment I above), is the first to claim our attention.

Let us place a given hue, say a medium gray, upon two different grounds, the one lighter, the other darker than the superimposed piece, the appearance will be strikingly different in each case. Upon the lighter ground it will look much darker, while upon the ground darker than itself it will seem much lighter in tone. This experiment may be very easily made by cutting out two pieces of moderate size from the same sheet of mounting paper and then placing one of them upon a lighter, the other upon a darker ground. It is really hard to realize that both pieces are from the same sheet of card, in fact one is only convinced by placing them side by side upon the same ground. The same phenomenon may be observed in the following arrangement. We have placed ten small disks of exactly the same tint of gray upon a larger disk divided into gradated segments from white to almost black. It will be noticed that one half of these small disks appear considerably lighter than the other half, but to prove that all the disks are identical, cover up the ground with a piece of white paper, in which apertures are cut corresponding to the positions of the small disks on the large one. Another unexpected revelation is this, the disk, the true brightness of which exceeds that of

the ground on which it is placed only by a very slight difference, looks almost as bright upon the perfectly black sector, while in the same manner a disk upon a ground only slightly brighter looks almost as dark as the one upon the perfectly white ground. It will therefore be manifest that the small disks have suffered a change of brightness by contrast with the ground, and that the smallest perceivable difference in brightness between the two surfaces produces almost the same effect of contrast as that produced by the greatest contrast which can be conceived.

We beg pardon for entering so much into detail, but you appreciate we are confident of the importance to our subject of the application of this remarkable law of effectiveness of small differences. We promised not to inflict on you any physiological or psychological investigations but we must for the sake of clearness interpolate a word or two.

All our knowledge is relative, that is, we know things in themselves only by their relation to things in general. So the terms light and dark are only relative ideas, like great and small, hard and soft, heavy and light, quick and slow, etc. All these ideas are based upon comparisons with some object accepted as a standard for the class; and so the light of one object may be comparatively dark when placed in relation with the light of another object. Thus an object

appears light to us if placed near a dark object suitable for comparison, but we take the same object to be dark when juxtaposed to a light one.

Our judgment in regard to similarity or dissimilarity in brightness is all the more certain the nearer the two surfaces to be compared are placed to each other, and the greatest degree of certainty is reached when the two surfaces touch directly.

The two surfaces A and A^1 are shaded exactly alike, the same is true of B and B^1. But while it is difficult to estimate the difference in brightness between A and B the difference is quite apparent between A^1 and B^1. Another unexpected peculiarity is discoverable by this juxtaposing of the two shades, which will at once show the value of the application of the phenomenon to the practice of mounting photographs.

Each of the two surfaces touching each other looks as if it were shaded off toward one side, while in reality each is covered with a perfectly even tint. Furthermore, the brighter surface appears to increase in brightness, the darker one in darkness toward the boundary line. It follows that the effect of contrast is strongest at this line. This peculiar effect, due perhaps to fluctuation of judgment on the part of the observer, shows us why the photographer has recourse to the method of double mounting or matting his print, that is, surrounding the print first with a narrow border of one tint and then superimposing the whole on a

RACING FOR THE HARBOR

BY THOMAS A. MORGAN

larger surface of a different shade. The photographer may fortunately hit upon the right combination, but he may know nothing of the general principle involved, and therefore we again urge the importance of our attempt to fix mounting on something of a scientific basis.

When we carry in ourselves no standard by which to measure saturation of color, or its exact place in the chromatic scale, we are easily deceived and so greatly perplexed. Let us give a few experiments to guide in selection. A slip of paper of a pale but very decided blue-green (like some of the tones employed in gum-bichromate or carbon printing), when placed upon a sheet of paper or a mount of the same general tint, but somewhat darker and more intense, will have the appearance of gray, and by no effort of the imagination or good sense or reason can it be made to look otherwise, because the imagination or reason or judgment has nothing in the field of view of an undoubted pure gray wherewith to make comparison, and in point of fact the blue slip or blue gum print actually approaches a pure gray more nearly than the larger mount surface on which it is placed. But let us go a step further and bring into the field a slip of gray paper and note the effect it will have on our original slip. Our judgment is again surprised by the unexpected. Instead of serving as a standard to correct the illusion of the first phenomenon it assumes at once the appearance of a reddish gray. The pure gray really did approach reddish gray more than the field of greenish blue surrounding it.

Now let us place a pale blue-green slip on a pale reddish ground like some of the artistic photo-mounts. We shall notice that it has assumed a stronger blue-green hue than when placed on a white mount. That is, the original tone has been intensified. It would be impracticable to separately consider all the effects of various hues in juxtaposition, and we shall merely touch upon the method for observation.

Place a strip of gray paper upon a mount of green (decided hue) and we shall find that no perceptible change takes place in the gray (unless the observer stares for some time at the combination), but note the difference in the effect when we place a thin piece of tissue-paper (white) over the whole. It will seem that the gray slip has been converted into a piece of pale purple. Now of what value is the knowledge acquired by this experiment to the photographer? It shows him that the contrast produced by strong saturated tints is much feebler than with tints which are pale. When we place the white tissue over the positive green sheet we weaken or dilute the color and at once modify the gray. So when the photographer takes a platinum print or a bromide of silver print and mounts it upon a bright green mount (which of course he does not do), he perceives little if any change in the gray tones of the photograph, but when he substitutes for the decided green mount a pale green one he begins to see a marked change in the tones of his picture; sufficient perhaps to injure its artistic value, or on the other hand, to increase the effect desired. The gray and its various gradations down to positive black would assume more or less of a purplish tint.

On trying the effects of other colors on the gray you will find that it assumes on light red (diluted color), blue-green; on pale yellow (Indian tint), blue cast; on light blue, yellow-brown; on violet (pale), yellow-green; and on purple (pale), green. Of course these colorations are very slight and are only perceptible with daylight (white light) illumination, but they materially affect the tone of the picture. In every case the contrast is weaker if the gray be much lighter or darker

than the ground on which it is placed. The practical deduction from these facts is that: white, gray, and black are more affected by pale tints (photo-mount tints) than by intense colors, and the effect of contrast is stronger with green, blue, and violet than with red, orange or yellow. Stronger with the so-called cold tints than with the warm.

All that has been said with regard to the contrasts of white, black and gray is applicable with slight modifications to any single color taken by itself; we mean photographs in monochrome. It should be borne in mind that every color is capable of exhibiting two kinds of contrast, viz., that involved by competition with other colors and that of mere light and shade. To summarize briefly, we find that reddish tones on a white ground appear darker and rather more intense; on dark gray or black (carbon) they become tinted orange-red and are made more luminous; dark dull red on a white ground may be mistaken for brown; on a black ground it becomes redder; green on a white ground looks deeper and richer; on a black ground somewhat paler; by contrast the mount is made to assume a rusty appearance and the green suffers; cyan blue on white ground is intensified and takes on a greenish tinge; it preserves its blue tone better on a dark mount; blue on white appears dark and rich but shows no tendency to green; on black by contrast its luminousness and intensity are increased.

The shades of gray have always been popular for mounting prints. It is a safe color to employ when in doubt. It seems that the complementary tints furnished by pure gray react on and strengthen the colors which call them forth, especially when the tints are pale (as is the case with photo tints in general). In conclusion, we have a word to say about the effect of the mount upon the photograph itself. Not only is the character of the tone of the picture changed but also the presentation of the aerial perspective. For instance, in a photographic landscape the distant mountains may be rendered much lighter or darker in tone by the character of the mount. The distance may be made to approach or recede. We shall not enter into a discussion of the cause, but merely say that even from the effect of successive contrast the outer parts of the bright surface must appear brighter than the rest.

If for instance, a light of perfectly neutral gray of a distant mountain range in a landscape be brought into juxtaposition with the margin of a white mount it loses all appearance of translucency and becomes flat, but in relation with a margin of a pale yellow (Indian tint) it gains in effect by a delicate blue ether-like appearance so that by a skilful employment of contrast, a photograph may often be made to appear luminous or brilliant. The whole subject of mounting photographs deserves an inductive method of analysis and the writer hopes that his imperfect attempt to put it within the range of scientific treatment may stimulate experiments toward the rationale of artistic mounting and thereby aid the photographer in search of pictorial effect.

What I mean by art is some creation of man which appeals to his emotions and his intellect by means of his senses. All the greater arts appeal directly to that intricate combination of intuitive perceptions, feelings, experiences and memory which is called imagination.

William Morris.

The Eastman Sepia Paper

By Walter Zimmerman

The result of my own experience is that the Sepia paper of the Eastman Company is the most useful of all photographic papers. Nevertheless, it seems, generally, to be far less appreciated than it deserves to be. There are two reasons for this. First, it is very cheap, and, while the makers are far too businesslike to let such a suggestion affect their action, the public is apt to think that, because a paper is cheap, it is therefore less desirable than the expensive kind. The other, and more important reason is that there are very few, even among expert photographers, who know how to use it in such a way as to obtain the best results. It is for those who want perfect prints that this treatise is intended. Let me start out with the assurance that if the suggestions and directions which I am about to make are implicitly carried out, such results will be obtained as will put this paper in the highest place among all who appreciate artistic effects in photography.

The stock used is heavy and strong, of a buff tint. The sensitive coating is laid directly on the paper, as with platinotype papers. It therefore dries quickly, and there being no collodion or gelatine, there is no possibility of the prints sticking together. They also dry out nearly flat. When entirely dry they should be placed under some light weight, such as a book, after which they will always remain flat. The surface is soft, or "matt," and, for portrait work, much less retouching is needed than with the glossy, gelatine-coated papers. The paper is also exceptional in that no matter how contrasty the negative may be, there is no "bronzing" in the shadows under any circumstances. The color of a properly finished print is a dark reddish brown, and not at all the sepia of the cuttlefish or squid. The color is so pleasing that, in my studio work, I find that the Sepia paper is selected for portraits in nine cases out of ten as compared with platinotype papers. In addition to portraiture, the Sepia paper is particularly suited, owing to its fine color and its broad effects, to exhibition and salon work. Nearly all of the prints which I have exhibited at salons in this country and abroad, during the last two years, have been made with this paper. Since all of my modifications for exhibition work are made on the negative, there is no occasion to use any of the special processes, such as the gum-bichromate, in which the modifications are made on the prints. All prints from the same negative can be made precisely alike, as the result of timing the first prints accurately, while printing, and, the weather conditions being the same, it follows that uniformity of work can be maintained as in no other way. For prints to be made later, the time of each negative should be marked on the margin. The question as to permanency is most important with all photographic papers, and, with the Sepia paper, opinions appear to have differed. It is no reflection against the paper to make this necessary statement. Prints which have been exposed to the daylight for two years have never, in any instance, changed a particle, *except* when made differently from the method which will be here explained. It seems to be a presumptuous thing to say that the directions of the maker of the paper are incorrect, but my prints and those of others, carefully made according to those directions, have unquestionably changed, with or without action of the light, after keeping for a few months. This statement is an important one, for the reasons

From exhibit of
SUE DORRIS, Eugene, Ore.,
Fourth P. N. W. Convention.

that photographers visiting me have frequently remarked that the prints which they had made on this paper had proved to be unstable, and my own results were shown in proof of absolute permanency. After explaining the method which I am now advocating, I have never heard of any complaints, except only in cases where others "knew a little better," and were unwilling to act precisely as advised. It must not be supposed that this means that the process is either complicated or difficult. On the contrary, it is so simple as to seem to be too easy to be good. The cause of the difference in the results is not apparent unless it be that the more complete saturation of the hypo by the old method causes subsequent deterioration of the very delicate chemicals.

The coating of the paper is a secret of the manufacturers, but the composition, in general, appears to be of silver and iron salts, principally the latter, with possibly some admixture of bichromate of potash. A good many analytic photographers have tried to make the coating for themselves, but have never succeeded in obtaining the "just as good" results which justify them in doing their own sensitizing. The paper is sold in only one grade, as just described. Recently, the stock was changed from a rougher and heavier kind, which several of us liked better. The Company is so ready in meeting the wants of its customers, that I wish it would furnish both rough and smooth grades, and perhaps, also, white paper as well as buff.

It is a very singular thing that, while there are articles by the score, relating to gaslight, bromide, platinum, printing-out and other papers, there does not appear to have been at any time a careful treatise relating to the method of handling the Eastman Sepia paper, so that these paragraphs will, the writer hopes, serve a useful purpose.

Right here it should be noted that the paper is somewhat limited in its use, where the finest results are demanded, for the very broadness of the effect which it gives makes it much less useful than gaslight or printing-out papers in cases where extreme detail is required. It is also unsuited for uniformly thin or flat negatives, although the directions which follow will give the best method to be employed with these negatives, as well as with the contrasty kind, for which the paper is eminently suited. As in all kinds of photographic work, there is the right kind of plate and the right kind of printing paper for every effect or result that it is desired to produce. This Sepia paper then, let it be said once more, is the ideal for strong negatives, and for large objects, rather than many small objects and for great detail. For these reasons, it can hardly be surpassed for portraiture and for large genre and landscape studies. The directions which accompany the paper are, to print for a very light image, wash immediately, tone for *five minutes or more,* with very weak hypo, wash again, and dry. They say that short toning produces red tones and long toning brown tones. This has caused many expert photographers to leave the prints in the weak hypo for fifteen or twenty minutes, and it is these who complain of lack of permanency. They argue that the longer the fixing the greater the permanency, but the results are quite to the contrary.

By my method (which I shall call the new method), the toner-fixer is made a little stronger, and the prints are removed from the bath *the moment* when the color has been completely and uniformly changed. Of course, this method is radically different, notwithstanding the fact that the chemicals remain the same. It is based upon the theory that the chemical change is effected instantly, and that

further chemical action is detrimental, rather than advantageous. This paper in many other respects breaks all of the old rules as to printing papers, as carefnl comparison will show. All of the directions here given will, of course, be based upon the *new* method, the old one having been merely quoted for comparison as to the principal difference. A great deal of the success to be obtained by the use of this paper depends upon the method of using it in the printing. It is unusually affected by the temperature at the *time of printing,* as well as by that of the water used in washing and of the toning-fixing bath. If printed in hot sunlight, on a hot day, the results are rarely good. The heat of the sun, if great, seems to impair the quality of the paper intended to be unaffected by the light, and the result is that muddy prints are so obtained. The remedy for this is to use tissue-paper in the printing window, at a little distance from the printing frame, when the day is hot and the sunlight strong. Cool and cold weather prints, except for this precaution, give the best results.

There is opportunity for a great deal of skill in using this paper for printing from different kinds of negatives. With the average good negative, print for a fairly defined image in the medium lights, orange in the shadows (which may be seen through the glass without opening the printing frame), and a hardly perceptible change in the high lights. For dense and contrasty negatives, print for a full image, in colors ranging from orange to yellow, the shadows being almost disregarded, the printing being for the faces and high lights. A great change is required in the method of printing from a very thin negative, particularly when it has great detail. With such a negative, print for an almost imperceptible image for the best results. This suggestion will save a considerable loss of paper, and enable the photographer to use it for negatives which he has believed to be impossible for the Sepia paper. On the other hand, when there is a negative which is so harsh that it is difficult to print with it on any kind of paper, try the Sepia paper in the following away. Print for a full image, even when there are high lights which, apparently, *will not* print. Disregard the rule, an important one otherwise, as to immediate washing, and leave the print, negative and printing frame together in the room over-night. The bichromate of potash (if it is bichromate) in the paper keeps on printing; or rather, the chemical action continues, and a comparatively soft print results when washed and toned the next day. This is the same effect that is noticed with gum-bichromate printing and clearing.

The next absolute rule, with the only exception just stated, is to wash the print *instantly.* Many a photographer has printed a lot of pictures on this paper, and after an hour or two, particularly in hot weather, has found that everything was spoiled, and the blame is laid on the paper. The rule is an essential one, where good, clear prints are expected. The paper is so very easy to manipulate that the photographer can afford to step to the washing tray at once, or else to have a pail of absolutely clean water by the printing window. The hands must, of course, be perfectly dry when the next piece of fresh paper is used, as it will show every spot of water or grease and every trace of hypo from fingers or tray. The use of water should be liberal, the tray large and the flow of water continuous. If a bucket is temporarily used on account of the washroom being at a distance, a thorough washing should be given afterward. Absolute cleanliness must be observed in washing and handling this paper. This means fingers, trays, rubber, everything which might come in contact with the sensitized surface. Spots are from fingers and streaks

are from trays. To keep fingers off, absolutely, until the final process, is the best rule of all. The time for thorough washing to remove all trace of salts unaffected by the light is ten minutes or more in running water. There is still another caution needed in regard to the washing process. The print must be dipped, not splashed. With a clean tray, filled with clean water, slide the print in, uniformly and quickly, and do not pour the water over the print, as is best with nearly all other papers. Splashing will make many and ugly stains, every drop a spot. Remove the print from a first tray to a second, in which a good many prints may remain, in running water, until you are ready to tone and fix. There should be no obstruction from other prints to the quick immersion of the next. Be careful in regard to rubber tubing from the spigot to the washing tray. The tubing contains sulphur, which produces dark patches, and it should, therefore, rest on the edge of the tray.

All of these suggestions as to the most perfect method of using this paper do not mean nor imply that it is at all difficult to use, quite the contrary. There is a right way and a wrong way, and this paper, being unusually sensitive, chemically, it should be treated properly or let alone. There will be no danger in accumulating a good many prints in the washing tray. If the tray is big enough a large morning's work may remain there, provided that there is plenty of water, and that the prints may move around and not stick together. The two essentials are absolute chemical cleanliness and thorough washing. Now whether you are an amateur who has made one or two prints, or a professional, who has made a large number, make your washing and your toning-fixing two different processes, so that you will not under any circumstances carry over a trace of hypo from one bath to the next. The next thing to prepare is the toning and fixing bath, and it is the simplest thing possible. For your stock solution, from a pint to a gallon, the proportion is this: one ounce of hypo to a gallon of water. This means a quarter of an ounce to the quart, an eighth to the pint, and so on. A pound of hypo, costing three cents, will make sixteen gallons, and will tone and fix prints by the thousand.

In picking prints out of the washing tray, be careful not to touch the surface of the paper with fingers which bring a trace of hypo from the toner. Lay the print, face upward, in a clean, empty tray, and pour over it, quickly, from a pint or quart graduate, enough of the solution nearly to fill the tray. If the solution is at normal temperature, as it should be, the print will change color at once, and the instant when the toning becomes complete and *uniform* take it out, and, with a rapid movement, plunge it in the tray full of running water prepared for the final washing. Remember that after the chemical effect of the weak hypo has once been produced, as shown by the changed color, any further action will be prejudicial, and the little hypo which is used in the toning-fixing process must be washed out quickly and thoroughly. The tray used for the first washing must be far enough away from that used for the final washing that there will be no danger of dropping the solution into the first tray, which will produce spotted and discolored prints. The whole process of washing and toning the prints made with the Sepia paper may be conducted in daylight, for after this paper has become wet there is no further chemical action from the light. If the prints are washed without being toned or fixed and then hung up to dry, they will when dry become subject again to the actinic effect of the light.

Some modification of the strength of the toning bath may be adopted with over-printed and under-printed paper. Where in the first wash it is evident that

the print has been over-exposed the strength of the solution may be doubled or tripled. The same directions will apply as to taking out immediately when the change in color has been effected by the toner, but the increased strength of the solution will reduce the print somewhat, particularly in the high lights, and the resulting print will often be satisfactory. I use the word "often" for the reason that when the print is allowed to remain too long in the stronger bath, the same deterioration will occur that is observed with the weak solution and the prolonged toning first referred to. Reductions of over-printing may be obtained by an extremely weak solution of hydrochloric (muriatic) acid in water, say one to one hundred parts. When sufficient reduction has been obtained in this way, wash the weak acid thoroughly from the print and then tone as usual. The resulting tone does not seem to be as good as when a normal print has been made, on account of the great sensitiveness of the paper to chemical action, already referred to.

On account of the small quantity of hypo used in the toning, thorough final washing for fifteen minutes in running water is sufficient. If the prints touch or lie on top of one another in the final bath, it must be expected that they will dry out uneven and discolored. As this paper floats on top of the water, the prints should be laid face downward in both the first and the final washing. In case the directions as to the length of time during which the print shall remain in the toner-fixer seem indefinite, the average time is ten seconds for full treatment. This ten seconds means with the bath at a normal temperature, or tepid. Very cold water produces bad results, with mean, pale prints, and the toning has to be prolonged. Hot water for washing and a hot toning bath have been experimented with by some, but my results have been that there is nothing like the method here described, with the water and bath at normal temperature.

Even when the greatest care has been exercised with all of the work so far, the print may yet be spoiled through neglect in the drying. As there is no gelatine or other sticky surface, the prints may, at once, be placed between blotters, and then laid out separately, face up, when they will soon be ready for mounting. There is an objection, however, to drying between blotters, since there is the temptation to use them a number of times, with the result of retaining a trace of hypo, which eventually will produce discoloration. As it is too costly to throw away the blotters every time, they should be reserved for prints which are wanted quickly. Another method would be to lay them out on boards or stretchers, but these, too, become, in time, impregnated with hypo, wth the same result. If waste paper, such as newspaper, is used to cover the board or stretcher fresh every time, there will be no harm. The surest and best method is to have a wire stretched out across the drying room, a little higher than the head, with a couple of dozen spring clips strung on it, and to suspend the prints from them. They should be hung by one corner, so as to drain more perfectly. If the floor is carpeted, old newspapers may be laid underneath to catch the water. Even with the drying there may be some modifications to the tone of the prints, according as to whether the drying is done slowly or quickly. If hung in a damp room with no circulation of air, the prints will be pale and lacking in snap and vigor. If hung in a warm, dry room, or in warm sunshine, browner, better and more contrasty prints will be obtained.

It takes a good while to tell all of the little secrets for obtaining perfect results with this paper, but it is all very quickly and easily done. Those who will be satisfied with nothing less than making a perfect print every time should read over all of

this carefully, and when the principles governing the use of this paper, as with everything else worth knowing, are thoroughly understood, there need be no further trouble. It is needless to say that the only way is to have a system that shall obtain perfect results every time. For those, however, who do not have the time to study the subject in all of its detail, the following brief directions will have to suffice: Print for the medium lights; wash instantly and thoroughly for ten minutes or more in running water; tone-fix in solution of one-eighth ounce hypo in a pint of clean water, removing immediately after color changes uniformly; wash fifteen minutes or more in running water; dry between absolutely fresh blotters, or by hanging by clips from the corners.

Something should be added here in regard to the relative printing speed of this paper. It is a trifle slower than platinum paper, and three times as fast as printing-out paper. As to the visible image, it should be a shade stronger than that of platinum paper. The first wash precipitates on the paper all of the salts affected by the light, and the toner gives the proper color and makes it permanent. Prints dry out darker and less brilliant than when wet. This should be borne in mind in making the exposure. A print which seems to be too light, when washed and toned will, for this reason, often be the most satisfactory. My experience with this paper (and I have used a large quantity of it), has been that it is quite unnecessary to roll in up and pack it in round tin boxes. It will keep perfectly when properly packed in envelopes and be far less troublesome to handle. The curling produced by rolling is awkward and has the added disadvantage of frequently requiring a touch of the finger to make it lie straight in the printing frame, thereby ruining the surface. The finished print must be allowed to become absolutely dry. If any dampness is permitted to remain in the paper when the prints are piled together, they will be found to be streaked or spotted. For these and many other acts of carelessness on the part of the operator, I suppose that the manufacturer is frequently blamed, and I will therefore say that I have never yet handled a sheet in which the slightest imperfection could be attributed to the makers. Imperfections, if any, in the finished prints, have been traced to one of the causes for failure which have been so carefully described here.

As may be understood from the foregoing treatise, the Eastman Sepia paper is, in many ways, quite different from all other photographic papers. There is still another peculiarity which I have been unable to obtain any explanation of. The paper *prints itself*. I mean that if two pieces of unexposed paper be placed face to face, they produce chemical action on each other. This may be more easily recognized by taking an unexposed clipping and placing it face to face with a full piece. When the paper is taken out, after a week or two, the shape of the smaller piece will be found plainly marked on the larger one. In order to produce the best effects with this paper, for professional, amateur or exhibition work, it should be properly trimmed, to suit the subject, and mounted with combinations of buffs and browns. In saying combinations, it must not be understood that I advocate more than one insert under any circumstances, as three or four mounts are productive of photographic monstrosities. But there are many pleasing combinations of buffs and browns for mount and insert, to be selected according to the general effect of the picture.

The spotting and retouching of the prints made with this paper is an important matter. The most perfect color is obtained by a mixture of Vandyke brown,

Venetian red and india ink. Unfortunately, the india ink which I used drew the color from the print producing yellow spots, which were, of course, ruinous. The nearest safe color for retouching is the mixture of the brown and the red, three parts of the former to one of the latter, on a paint saucer. It need hardly be said that the color must be used very dilute for the lighter parts of the print. When all of the directions as to the use, printing, developing, fixing, washing, drying, spotting and mounting of this paper have been learned, the reader will have obtained most valuable information, whether he be professional or amateur, for the production of prints which will equal and probably surpass those made with any other paper or by any other process. From this broad statement, many will differ, by making an exception of the carbon process, that being just a matter of taste, the writer not fancying the minute detail brought out by that otherwise beautiful method.

Finally, this paper has been used very largely for making proofs on account of its quickness, cheapness and ease of finishing. There are many who use it in this way, not realizing that the finest effects of all may, with care, be obtained with the same paper which is now lightly regarded.

FISHER FOLK BY WENDELL G. CORTHELL

First American Photographic Salon

By Jeanne E. Bennett

When the photographic world, in the early spring of this year, received the announcement of the First American Photographic Salon certain questions arose in the minds of most of us, which, as the time for holding the Salon drew near, as the questioner was for or against the movement. Boiled down, these questions resolved themselves into (1) What about that jury, will it actually serve or not? (2) What will be the character of the exhibition as finally hung, and (3) Will it prove a success?

The first and second of these questions we will try to answer briefly in this résumé, the third will be answered by the public to whom the verdict is left with all confidence. That wonderful jury. All agreed that it contained a heretofore unequaled array of imposing names certainly so far as anything relating to photography was concerned, and when the knowing ones went over the list they shook their heads and said, "No, never in the world will it be possible to get *those* men together to pass on a lot of photographs." And indeed it did seem to be expecting rather too much of artists of their standing to give a day of their valuable time for that purpose. Hence it was not much to be wondered at when we heard from certain quarters that the jury would not actually meet and do the judging, but that some one or more of the management would do it behind the scenes, and the like.

When, however, Monday, November 14th, arrived there met at the rooms of the Metropolitan Camera Club of New York City the following named jury: Kenyon Cox, George R. Barse, Jr., H. Bolton Jones, Will H. Low, Francis C. Jones, Fredk. W. Kost, Walter Clark, Ben Foster, Irving R. Wiles, Robert Henri, and Alphonse Jongers (at later sittings John La Farge, Childe Hassam, Edwin H. Blashfield and John W. Alexander were also present. These all served during entire sittings), who at once settled down to their task after the manner of men who knew their business and were determined to fulfil to the letter the promise made months before, to the management of the Salon. At the outset (we must remember this was their first experience in judging photographs) the question arose, "Upon what basis shall we make our judgment and what shall be the rule for guidance in the acceptance or rejection of the work submitted to us? Kenyon Cox acted as spokesman: "Method must not be apparent. Work must not be purely imitative nor attempt to give the effects of colorists. Its own field is so beautiful, dignified and important that it is not necessary to copy the methods and effects of painters," and to this they all agreed. Let us remember this as it will help us to answer, later on, the second question.

The standard or rule having been fixed, to use a figurative expression, the gentlemen of the jury took off their coats and went to work. Work indeed it was, for there were upwards of 9,000 frames to be examined and out of this number only about 400 could, by any possibility, be hung in the gallery secured. The whole day was spent in this endeavor, and as it drew to a close it became plainly apparent that the judging could not possibly be half completed. The gentlemen in charge began to feel nervous and asked themselves what, in the premises, could be done. To request the jury to give another day was beyond the reasonable, and

"DRINK, FOR ONCE DEAD
YOU NEVER SHALL RETURN"
by GEO. H. SEELEY
First American Salon

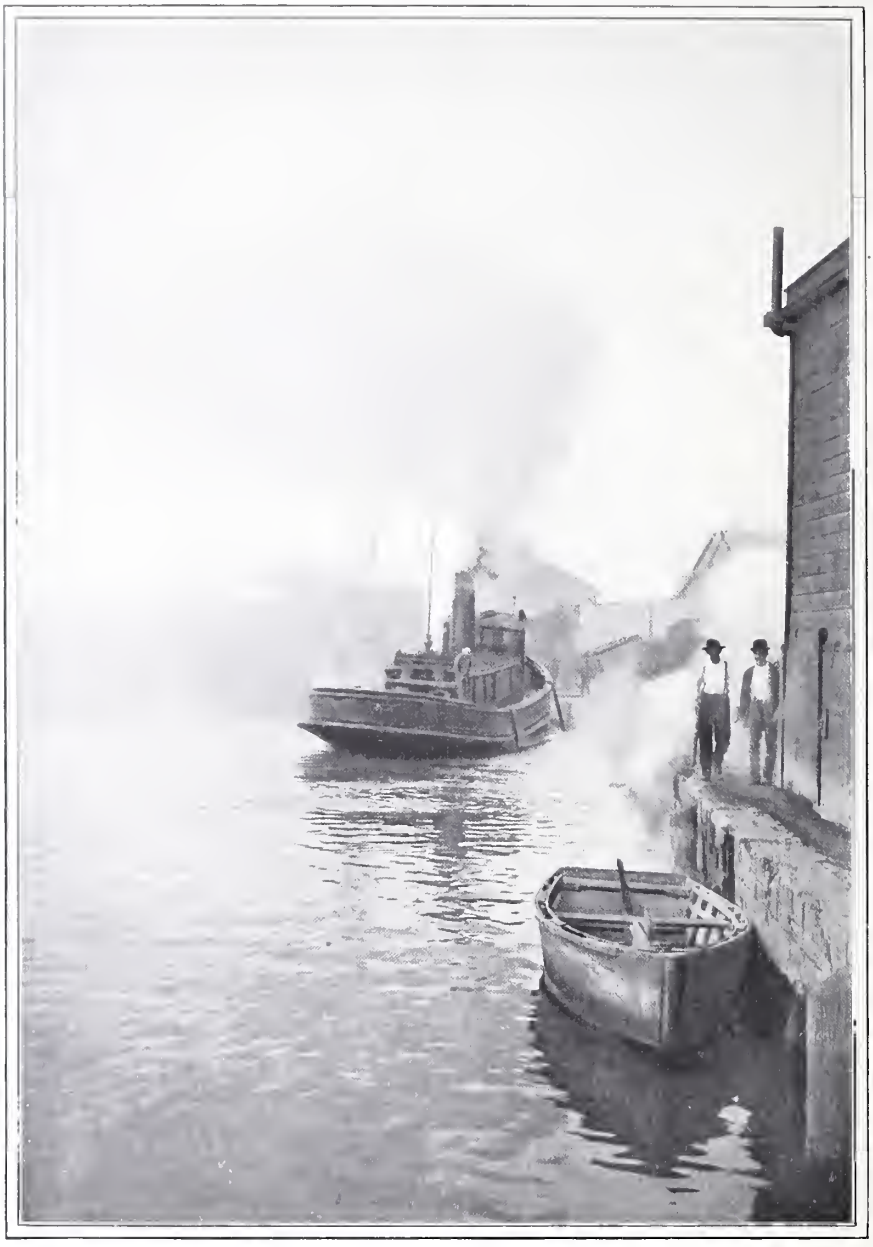
yet without it how could the balance of the would-be exhibitors receive proper judgment. It really did look as if the knowing outsiders would prove partially correct after all and that as far as some of the photographs were concerned the judging would, of necessity, have to be done by the managers themselves. Their uneasiness was groundless, for by this time the jurors had become thoroughly interested and not only did not have to be asked, but of themselves volunteered to meet again. And meet they did, not only the second but the third time.

Thus all the photographs, good, bad and indifferent, were submitted to them, and our first question was answered in no uncertain manner. Now as to the second, the character of the work passed by the jury. Does it, or will it meet with unqualified approval by the photographers and by the public as well? Most assuredly not, for in this as in all other cases, sides will be taken, favorable and otherwise. We ourselves must confess to a divided opinion in the matter. Being somewhat behind the scenes we had opportunity to see, not only what was accepted but also some that was rejected. The standard set by the jury was so radically different from that to which we pictorialists with the camera have been accustomed that the result gave us somewhat of a surprise. For instance, when some of our beloved gum prints upon which we had bestowed so much care, were discredited because the method, the brush, was apparent, it made us feel queer, and when some of our "straight" work also reposed in the ranks of the rejected because, forscoth, it struck the jury as being in imitation of the work of some painter, it made us feel queerer still. We say this not in any spirit of faultfinding, for we are not of the number to complain and we realize that when we submit work to a jury we should cheerfully abide by its decision. What we mean is that the rule set by this jury has been productive of an exhibition different from that to which we have been accustomed and that in consequence, as this is the first of its kind, comparisons, always odious, cannot fairly be made.

In the exhibit itself, as it hangs on the walls of the Clausen Galleries, we find a wide range as regards the workers of the world. Canada, England, Scotland, Belgium, Denmark, Italy, Russia and others are represented, though of course the majority come from this country, and we find them from the Atlantic to the Pacific, from the North and from the South.

The Western exhibit is especially worthy of notice and we congratulate California, Oregon, Colorado, etc., on their number of strong workers. Oscar Maurer has four frames, the best of which is "In Amalfi." "In Marin County," reproduced in the catalogue, is strong in composition and only a sure and good worker would have attempted it. "On the Maas," though small, is a gem.

Herman S. Hoyt's four, all good, though perhaps "Indian Pottery Burner" is the most interesting. John T. Diebels' "Restless Sea" is full of motion and very fine. E. N. Sewell's "Oyster Boat" is simplicity itself, a thing so hard to produce in photography. Elizabeth Burton's "Bathing by the Stream" does not appeal to us, but nudes seldom do in photography. Adelaide Hanscom's "Mother and Child," although hackneyed in name and subject, is a beautiful picture, full of charm and fine in technique. "Belfry Stairs," one of the two by L. M. Kaiser, is a fine gum print and among the best shown. "Portrait," by W. E. Dassonville, is a clever study in black and white, and will attract attention anywhere. Laura Adams Armer shows "The Laurels," of fine and unusual composition. An example



ALONG THE DOCK
by DR. W. F. ZIERATH
First American Salon

PETITE MARIE
by JEANNE E. BENNETT
First American Salon

of how a photograph can be good and soft even if full of detail, is the "Early Morning in the Woods," by Walter A. Scott. W. J. Piatt's "Dusk" is especially commendable for its composition. The portraits of Hana Robison are fine, vigorous specimens of that branch of work. The study in the nude by F. E. Monteverde is a bold attempt at a difficult subject for photography and one in which diffusion is well suited. His "Fish Cleaner" is broadly treated and worthy of close study. Chas. E. Townsend has three good, strong pictures. His "Yosemite in Storm" is certainly a masterpiece and by some of the jury was considered the best in the Salon.

W. J. Street, F. M. Braddock, Herbert G. Ponting, Edward H. Kemp and Fayette J. Clute, all exhibit strong examples, mostly marine work, full of local color, with fine lines and will hold their own in any salon. Work of Dr. Genthe, although on the way, was not to hand at this writing. Oregon has five representatives with a total of seven frames. "The Usurper," by Helen P. Gatch, is a nicely managed group of a mother and two children and was well worthy of reproduction in the catalogue. "The Meadow," by Bertha Breyman; "Mighty Deep" and "The Fishers," by O. M. Ash; "White Death," by Will H. Walker, and "Oregon Wild Duck Lake," by George F. Holman, are all good. The last named is lacking somewhat in perspective, the values being too equal in foreground and background. Colorado exactly equals Oregon in the number of both exhibitors and frames. Of the four by Thomas A. Morgan, by far the best is "Out of the Mist," although his "Close of a Stormy Day" is a simple subject, well treated. "Evening," by C. S. Price is a little disappointing. The tree trunks in foreground are strong, yet lack roundness and seem too close to the background. George F. Clifton and George L. Beam have one frame each, both of which are good. Coming further East, Minnesota has three exhibitors with a total of eight frames, of which Louis Fleckenstein's (director of the Salon Club) name is on five. The best of his being "The Water Supply," and "Landing the Gamey Bass," the latter a strong study, full of action and broad in treatment. "Edge of the Marsh," by C. F. Potter, Jr., is a charming bit of landscape, harmonious in every way. We had expected to see some of Corydon G. Snyder's etching effects but suppose the jury ruled them out as showing the method.

Nellie Coutant did well for Indiana, having seven frames. Her "Spring" is treated broadly and is an attractive child picture. "Who Pulled the Tulips?" would have been more interesting had the child seemed penitent. John Chislett has four, the best of which is "Gray Day at Sea."

Among Michigan's seven frames, Fedora E. D. Brown's "Water Way" stands out bold and strong and her "Old Fashioned Girl" is one of the finest studies in the Salon. One of the few red gum prints accepted was an Italian landscape by Mrs. E. W. Willard. It is good but should have had more foreground. "In Venice" lacks atmosphere; "Poplars" being stronger. A delightful study of woodland is "Wet Spring Woods," by Charles E. Barr.

Illinois comes out strong with nineteen exhibitors. Solon L. Gates has six portraits, all fine and artistic, broadly treated and could hardly be surpassed. Charles O. Axell has also a portrait simple in composition and reminding one of Whistler. D. H. Brookins, Dr. C. W. Hawley, C. G. Dudley, J. L. Rosenberger, C. W. Taylor, George T. Power, F. A. Nichols, Clayton W. Mogg, A. W. Engel,

THE SWIMMING HOLE
by CARL RAU
First American Salon

WINTER EVENING
by OSBORNE I. YELLOTT
First American Salon

MEXICAN THUNDERSTORM BY DR. CLARK W. HAWLEY

First American Salon

Frank Green, Robert E. Weeks, Dr. F. Detlefsen, A. D. F. Gardner, William P. Gunthorp and Mrs. W. W. Pearce all show good examples.

Wisconsin has eight frames, in all, by three exhibitors. "Waiting for the Fog to Lift," by Dr. W. F. Zierath, almost looks in parts like a wash drawing and is exceedingly interesting. Carl Rau's best, out of four, is his "Swimming Hole." J. H. Field's "Fagot Gatherer" is well worthy of mention.

Among the large representation from Ohio stands foremost F. C. Baker's "Barn," which is good and strong and shows what can be done with a simple subject when well rendered and taken from the right point of view. Clarence G. Brooks, J. W. Schuler, George F. Kunz, E. G. Fountain, F. van Houten Raymond, H. W. Minns, W. F. Provo, Carle E. Semon, Mrs. E. C. Matthews, E. E. Cahoon and Ralph E. Brown all show creditable things.

Walter Zimmerman of Philadelphia has three fine studies; his "Traumerei" is one of the best. Adolph Petzold has seven splendid gum prints, all good and interesting, especially "Returning Home" and the "Road To the Sea." Allen Drew Cook, six frames, has some portraits almost life-size, which seem rather large. "Gertrude" and "Portrait of Mrs. Coloney" are fine and of a more pleasing size. Elizabeth Holden has a charming print entitled "Billy and His Mother." R. J. Hillier's "Harvesting" is good, and these together with R. S. Kaufman, Margaret L. Bodine, E. F. Ryman and John Dolman complete Pennsylvania's list.

Julius C. Strauss, the well-known photographer of St. Louis, has three of his excellent portraits. The Misses W. and G. Parrish have two studies of "Babbie," of which "L'Allegro" is more interesting, being full of expression and charm. George Alexander of Kansas City has three flower studies, very sweet but a little commonplace.

Osborne I. Yellott holds the Maryland banner all by himself and does the State credit with eleven frames. "Over the Hill" will always hold its own and his "November" is a fine example of carbon, good and strong in every way.

The four exhibitors of Maine all come from Portland, and most of the prints are good, especially the "Wave," by F. H. Thompson, and "Wet Day Along the Docks," by S. S. Skolfield.

Of the three frames from Connecticut, "Goat Herds of the Campagna," by Dr. E. P. Swasey, easily carries off the palm.

Among the six exhibitors from Washington, D. C., Albert Le Breton stands out in bold relief with "The Ruined Chapel" and "Desolation," both fine examples of gum.

We always expect good things from Boston and are not disappointed. F. Holland Day's work is familiar to all photographers and his "Master of the Hounds" is his masterpiece. We sympathize deeply with him in the loss of his work by fire and only regret that he did not have more of his prints at this Salon and thus have saved them. George H. Seeley is one of the new names that have come out and he has swept things before him. He stands head and shoulders above most of the exhibitors. His work is soft and strong at the same time. Full of originality. "The Pines' Whisper" makes you dream and hear whispers indeed. "The Grave's Compass," "Landscape" and "No Title" are all pictures that will live and be remembered because they deserve it. Frank R. Fraprie, W. G. Corthell, John R. Smith and Miss Frances Allen complete the list for Massachusetts.

Henry Hall and Margaret L. and Edith H. Tracy have a total of four frames, being all from New Jersey, and of which "Rough and Ready," by Hall, takes the highest rank. Last on the list of states we name New York with nearly thirty names and many more frames.

Curtis Bell, with nine frames, has all new work and very creditable. "Jackstraws" an interesting group of four children and one that is full of interest, we consider his best, although "Passing Shower" and "Fog Clearing Away" both show fine atmosphere. Rudolf Eickemeyer, Jr., has ten frames, some of which have been hung before. "Summer Sea," one of his best, is always a welcome visitor. "Decorative Portrait" and "Portrait of Miss N." are both good examples of the work of this artist. In "Newsboy at Night," and "A Winter Night," by Lee Hamilton Kellar we have two delightful examples of night effects. J. C. Abel shows a good platinum on Japanese paper in "Sunlight in the Woods." The best of the four by W. H. Porterfield, "Life Guard on the Jersey Coast," is strong in every way. Messrs. Benton, Park, Chaffee, Boger, Furness, Lloyd, Knox, Gilbert, Hendrickson, Holden, Farquharson, Zerbe, Wallace, Schreck, Wagner, Horne, Maenaughton, Shipman, Keller, Kent, Miss Louise V. Hitchcock and the writer complete the list from New York.

Turning to the foreign exhibitors, John Hepburn has "Village Doctor," a fine bit of genre. "A Shaft of Light," by S. G. Kimber, is a splendid study of an old cloister with the lights and shadows well managed.

"A Gleam of Light" is a fine marine by William Clayden. Brussels, Belgium, has three exhibitors, Victor Stouffs, Leon Sneyers and Ferdinand Leys, all good.

R. Duhrkoop of Hamburg leads all others with fourteen frames, most of which are large studies in gum.

Henri Foucher, France, "Un Coin de Provence," is only fair. Dr. T. Moeller of Denmark shows a good night study. Oscar Soldtner of Russia sent a portrait of a small boy. Italy has one strong representative in Alfredo Ornano, most of whose pictures are well managed and original.

The Salon shows a variety of work, delicate, soft, sharp and strong, in platinum, gum, carbon and even silver prints. It seems to cover the whole field of photography and is decidedly instructive to those who wish to study it with a fair mind. Long live the American Photographic Salon.

One Amateur's Experience

By Sheridan L. Buck

"You press the button and we do the rest." In my estimation, the too literal acceptance of this familiar expression is the cause, not only of the popularity of the kodak but of the disappointments so often attending the efforts of those too sanguine in their expectations. I must confess that I am but a recent arrival in the kodak field but I have learned many things since my introduction to the work. Let me enumerate a few. Every dealer will endeavor to impress upon the mind of the would-be amateur how exceedingly simple is picture-taking and picture-making. A camera secured, one will find that there is no work in existence concerning which one can obtain so much advice and information, gratis. Even those who have never used a camera will shower advice upon you; no two will tell you the same thing and each one's method is the best. Floundering about

PLAZA DEL MAR AND POTTER HOTEL.

in this sea of conflicting advice the hapless beginner fails entirely to use his own good judgment, which in many cases would be of more avail. The abundance of the supply so overwhelms him that he loses his head.

My first camera was a four by five, box type, that the dealer assured me was the latest and best on the market. It cost me eight dollars and that sum plus the cost of a quantity of material was expended in learning that it was incapable of producing good pictures except at rare intervals. While it might have been my own fault I am certain of one thing, and that is that I "pressed the button" most industriously. I exchanged this camera for one of the folding type and after an expenditure of five dollars for films I was rewarded with three negatives that were not light-struck. I am something of a "stayer," but I must confess that photography was beginning to lose its charms for me. Being a constant reader of Camera Craft, I came upon an article entitled "An All-Round Camera," by H. D'Arcy Power, M. D. I at once provided myself with a

SANTA BARBARA MISSION

Folding Pocket Kodak No. 3, and while my troubles did not all cease at once, they disappeared so far as fogged and light-struck negatives were concerned. Out of almost one hundred negatives made with my No. 3A Kodak there is not one that will fail to produce a good print if properly handled.

In my first attempts at picture-taking I was like most other beginners. It was hard for me to realize that my prints would show only black and white. Many films were wasted in trying to portray the beauty of scenes that depended entirely upon their color for the charm which they possessed. In the print, depth and roundness gave place to a meaningless jumble of black and white, devoid of form or detail. I began to study my subjects carefully before making the exposure, asking myself if the lighting was such that different objects would stand out one from another; if the directions of the lines were such that the eye would be pleased; and if the arrangement of the masses were such that the picture would be interesting instead of puzzling. My pictures improved and I demonstrated conclusively that there is something more to be done than "press the button." The camera will not "do the rest" without a good deal of help from the operator. To me, the pleasantest part of the work is printing on Velox paper. For this work I procured two trays exactly alike and after getting them mixed and wasting a dozen sheets of paper trying to develop them in the hypo, I provided myself with a glass tray for the developer and one of rubber for the hypo. After printing several from reversed films I discovered that the shiny side of the film should be placed next to the glass in the printing-frame. Another time I made two dozen prints, each of which had large, irregular spots on them. I showed them to several professionals; one said "poor hypo," another "dirty developer." I discovered that they were caused by failing to rock the tray while developing. Again I made some prints with copper-colored spots. These I found were due to the developer remaining in the emulsion, being allowed to oxidize while in the fixing bath. Sliding the print into the hypo face down so that no bubbles are allowed to form, and sliding it under the prints already in the fixing bath so that the surface will not come in contact with another print, will prevent this trouble. My printing is all

STAIRS TO SUMMER-HOUSE HIDDEN IN LIVE OAKS

done by artificial light and in my hands, the prepared developers and fixing baths put up by the makers of the paper, give the best results.

I venture to say that not many amateurs have met with as many obstacles as myself, but I have found pleasure in overcoming them, and do not begrudge one penny of the amount expended in probing into the mysteries of photography. When I shoulder my kodak and go forth I am after something, and as a rule succeed in getting what I want. To the amateur who has laid aside his camera, or who is contemplating such an act, I would say: You are depriving yourself of a great deal of genuine pleasure. If you will provide yourself with a good camera and start again with a determination to conquer the few small difficulties, I am sure the way will grow brighter and brighter as you overcome the obstacles which have discouraged and disheartened you in the past. The illustrations accompanying this article are a few that show the variety of my work during the past summer, and while no great artistic merit is claimed for them, I believe that in them I am well repaid for my work.

SURF-BATHING AT HIGH TIDE

Artistic Retouching

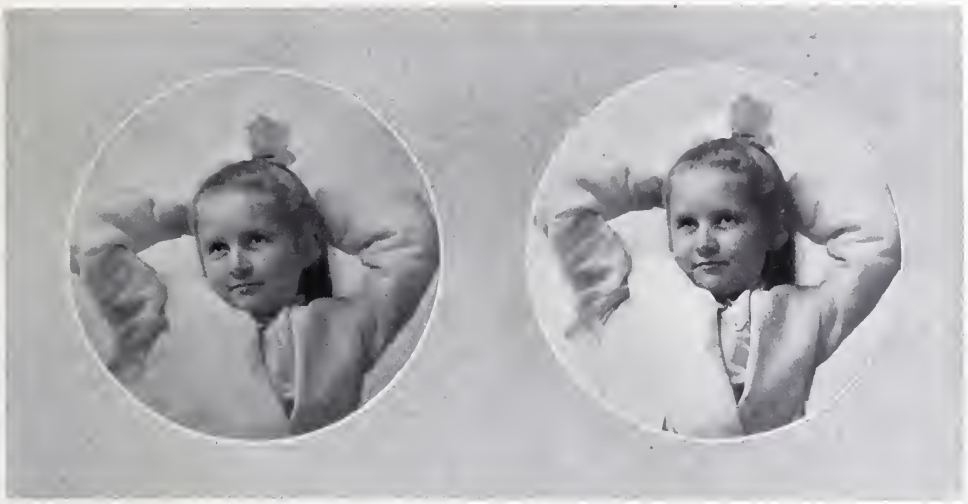
By Clara Weisman

A true portrait must have distinction, not solely by virtue of its technique or handling but by its personality as well. If it can be made to convey an impression of a personality it will possess much that makes a picture interesting. If it is merely a precise representation of the subject at hand it is lacking, as this alone makes it commonplace.

Retouching is an art; and the retoucher must remember that any style or class of work, to possess pictorial qualities, must be governed by those art principles which are everlasting, eternal. A good retoucher is a student of character as well as an artist, who, consciously or unconsciously, appreciates a portrait possessing a deep psychological or artistic significance. Such workers do not bring the faces of their subjects to a plaster-cast or marble finish; rendering them as lacking in natural flesh effect and void of expression and feeling. They do not retouch the soul entirely out of their portraits. Retouching improves the work, but only when it does not fail to retain the natural characteristics distinct.

Experience in drawing, an appreciation of form or beauty, a knowledge of physiognomy and of the anatomy of the head, an understanding of the placement and action of those muscles of the face that produce the changes of expression; all are important helps that enable the student to perform his work with due regard to form and modeling. A study of light and shade in the studio under the light, the gradations, the tone-values, will result in a marked advancement if made before the actual work of retouching is attempted. The pupil should study the drawing of each individual feature of the face from any position and with

The first is not retouched; the second has received only necessary retouching to perfect flesh technique and soften lines while preserving flesh effect and character. The third shows the effect of stipple with softness of flesh destroyed, giving hardness.



The first is from a negative giving a flat and lifeless print. The second is from the same negative after high lights of face have been built up; some doctoring being done in printing to bring out the lights while allowing the shadows to gain strength.

different effects of light and shade. He should also observe the gradations, their relative value and their proportional density as interpreted by the light in the studio.

In a plain lighting or three-quarter view of the face, there are five points of light that are most essential to a well-illuminated head; the light on the forehead, bridge of the nose, on the cheek-bone, upper lip, and chin. The other lights on the face are secondary and are of less intensity but equally necessary to produce roundness. The gradations are high lights, half tones (or half lights and half shadows), and shadows; the half shadows being in a lower key than the half lights. The object of retouching is to perfect a well-timed and a well-developed negative. A negative should contain all the gradations between the highest of its lights to the deepest shade; innumerable intervening tones, each blending into its neighbor so imperceptibly as to be felt rather than seen, thus producing a balance of tones, without which, harmony is lacking.

A contrasty lighting with under-exposure gives a negative that can avail but little. The half tones, the tones that bind together the high lights and the shadows, are missing. In a flat lighting with over-exposure the life of the image is lost. The negative is lacking in high lights and in clear, luminous shadows. With proper manipulation in the dark room, plates exposed under both these conditions may be greatly improved; the under-exposure being less amenable to treatment calculated to produce good quality. Such a negative will be harsh, will have less of the finer, clearer, purer quality; will be void of atmosphere, and lacking in that intangible, invisible something that exists in a first-class negative. A negative with good exposure, one with rather a tendency to over-exposure than under, is the best in quality and is the best to retouch. Best because of requiring the application of less lead to complete the work the operator has begun; completing his work being the true office of the retoucher. From the highest technical standpoint, no amount of lead in retouching of or doctoring in the printing, can make the print from a poor negative what it would have been had the subject been properly lighted and the plate properly exposed and developed; for retouching should be but perfecting that which is already well done. Much, however, can be done to improve

Not retouched; while showing all defects, still retains character and is in atmosphere.

poor negatives by manipulation and retouching; so much so that very passable prints can be produced from seemingly indifferent and hopeless negatives. Such work requires great skill, but it alike requires great or greater skill to do only as little work as is absolutely necessary to preserve the beauty and strength in an already beautiful negative: beautiful in its capabilities of producing a picture that possesses the artistic qualifications requisite in the production of a fine picture.

Retouching is necessary and will remain so as long as there are blemishes in the skin, so long as the lens produces detail too microscopically, so long as there are defects to be removed and expressions to be changed; not taking into consideration the retouching made necessary by poor lighting and poor developing.

Detail may next be considered. Simplicity gives beauty and strength. It is easy enough to be elaborate but to add just enough detail to make a picture beautiful because of its simplicity is the key-note of all work that is beautiful, grand and strong. Detail in itself is not a blemish, but detail out of place is objectionable and a fault. High lights should be simple because light covers up detail. Detail belongs in the half tones or rather half lights; but not in the highest lights. Shadows also should be simple, just enough detail to produce that breadth and transparency which is gained by having some amount of detail in them. A shadow should not be so void of detail that it is empty or opaque, there should at least be some indication of flesh or drapery, as the case may be. Rembrandt, one of the greatest portrait painters, produced deep, transparent, mysterious shadows, with soft blendings, beautiful detail and great depth; and yet his treatment was broad and simple. With a knowledge of the above facts regarding lights and shades and their relations to form of features and expression, the student is better able to take up the retouching pencil to greater advantage and with assurance of better results.

There are two styles of retouching: the mechanical and the artistic. The mechanical is usually the result of working for a grain or stipple; more attention being paid to that than to the quality of the flesh technique or character. Beginners are too often instructed how to secure this stipple, losing sight of the higher qualities that help to produce the picture. This stipple cannot be used and yet retain flesh technique; it is a something that is manufactured, over-done, and a something that takes out all semblance of life. The artistic method is different.

While the work proceeds; that is, the taking out of imperfections, a little modeling here, a little blending there, the softening of a line, the bringing out a muscle, prominence, or feature in another place is accomplished. By seeing that this is all done with a certain degree of finish, the texture or flesh technique will take care of itself. A certain degree of finish is permissible and just. Nature tends to regularity and uniformity; the natural pores of the skin are a good example. Observation of nature teaches us that a subject with the stamp of age upon his face and a coarse texture of the skin should not receive the fine and smooth effect that is characteristic of a child. The texture must be in keeping with the subject's age and individuality if a natural appearance is the wished-for result.

Forehead stippled; out of atmosphere, hard effect and character lost, due to stipple.

Compare two prints from the same negative, the one retouched with as little work as is necessary to make complete the picture and the other with the same changes made, but further retouched with the object of having a stipple. It will be found that the former possesses a beautiful naturalness, a life likeness and that a feeling exists. In the latter the existing good qualities have been changed to a hard effect and merely for a fancied improvement. There is no truth in a stipple. It takes only a few strokes to destroy the evasive, elusive quality, the most delicate of delicate possibilities a negative may possess. It is undeniable that more work or more lead than is necessary will destroy this almost intangible quality. No amount of lead can make the negative more beautiful than that part which is already perfect. As another illustration: retouch a forehead with this stipple effect and then examine the negative. Compare the rest of the face which is untouched with the forehead carrying the stipple. There will be found a "setting in" or a feeling of atmosphere in the untouched part, while the forehead will appear in front of and out of atmosphere; it will stand out of something instead of in. This result is due to a violation of the law governing the rendition of perspective and atmosphere which will be discussed in some succeeding article.

One of the hardest things for a beginner to learn is to secure in his work that appearance which makes the texture obtained seem a part of the original skin and not a surface laid on top of the skin. While working, he should think first of the stroke; its placement, weight, direction and length. The rest will take care of itself later. The first tendency will be toward a too heavy stroke, the next will be to make the stroke the same weight over the entire face. Each imperfection

requires a certain weight of touch and no other will do as well. Each gradation requires a lighter or heavier stroke, according to its intensity. By this change in the weight of stroke which is applied to the respective parts, the work will gradually perfect the negative, and the result will have the appearance of being a part of the skin instead of a surface applied above it. Such work also preserves atmosphere and modeling, secures perfect flesh technique and at the same time retains whatever else the negative may possess that is good.

In future articles on the same subject I shall take up various phases of the work and endeavor to show examples of both good and bad work; over-elaboration and misdirected effort as well as work showing an appreciation of the requirements and possibilities of retouching. The subject is entirely too broad a one to permit of more than general treatment in one article but I have thought it best to make this effort in the direction of practical instruction as little dependent upon what is to follow as possible, to the end that there need be no loss of interest through incompleteness of the matter presented.

To the photographer who desires to produce pictures, a knowledge of the rules of art is of the most emphatic importance. From the nature of his art he is less called upon to give a form to pictorial conceptions that give pictorial embodiment to existing facts, and it is often only by arrangement of existing material and management of light and shade, that a pictorial character can be given to the representation of prosaic facts. "These rules, of old discovered, not devised, are nature still, but nature methodized." H. P. Robinson.

HER VOYAGE DONE

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Oregon Camera Club

Tenth Annual Exhibition of Oregon Camera Club

The tenth annual print exhibit of the Oregon Camera Club was thrown open to the public November 21st in the club-rooms, Macleay Building, and some of the finest specimens of photographic art ever seen in Portland were given to public view. The exhibition of last year was a most creditable one and much fine work was shown, but in the recent exhibition the technical manipulation of prints was superior and the selection of subjects was more confined to the lines of art than heretofore. The framing was in quiet but perfect taste and the general tone of the collection good from every standpoint.

A carbon by G. F. Holman entitled, "After the Storm," was the winner of the Holmes marine trophy. Another marine which will be greatly admired by artists is Alfred Anderson's "Her Voyage Done," reproduced herewith. This carbon has been well handled and would have been the gem of the exhibit had the moonlight effect been brought out in blue-black carbon instead of sea-green. This picture was in close competition with Mr. Holman's marine for the Holmes cup. George S. Shepherd presented a very fine marine done in bromide, which also received favorable mention in that class.

"Antarctic Fury" was obtained under great difficulty in the South Atlantic Ocean, the artist leaving the vessel on which he was voyaging and going out in a rowboat in order to get height to the waves. This picture should have been shown in color other than black, much of its beauty having been lost in the printing.

The best landscape in this year's exhibit was presented by Henry Berger, Jr., in "An Idle Little Stream," taking the Gavin cup. Mr. Berger has treated his subject most artistically and his mechanical work was well done. There were many other good landscapes hung in the exhibit, notable among which were those in the general collection of Harry G. Smith, who took the Judd cup this year. The gem of this collection was "Gray Day," also reproduced, a gum print so cleverly executed that the walk looks wet and slippery

SHARPENING THE PLANE

BY H. J. THORNE
Oregon Camera Club

and the Oregon mist hangs in the background. A flower study is also good.

"A Portrait Study" by H. J. Thorne won the Smith trophy. There was much good work done in portraiture this season, but Mr. Thorne's was considered by the judges as excelling all others. I. N. Lipman showed some work in this line, and Miss Hutsby, Mr. Holman, C. J. Gray, Paul Wessinger, Mrs. P. A. Davis and others had creditable specimens. J. A. Haran showed some good Indian studies, and Kenneth Mackenzie, the youngest member in the Club, had a good thing in a portrait of a small Indian boy, entitled "Sunny Jim."

The Alfred Anderson trophy for the best genre print was awarded to Lynds W. Jones, whose "No Fun for Baby" tells a perfect story of childish mischievousness. L. C. Henrichsen's exhibit was good, "At Nature's Tavern" deserving especial mention, as does C. H. Hoeg's landscape, "The Creek." H. Claussenius, Jr., showed one of the best pictures of Mount Hood seen for some time, and O. M. Ash, whose prints were not entered for competition, has hung some artistic work.

GRAY DAY — BY HARRY G. SMITH, Oregon Camera Club

In outdoor portraiture George E. Beeson's "A Positive and a Negative" was very fine, and Miss Hutsby's Coquette" was also splendid. G. F. Holman had an unusual study in "An Egyptian," and also in "The Wounded Monarch," which is a wounded mountain lion, taken in the open. The appearance of this lion both in posture and apparent texture of his skin as photographed have given rise to much comment favorable and unfavorable. The print is well done in carbon.

Hosmer K. Arnold, I. Lesser Cohen, W. D. Deaver, W. H. Downing, F. H. Fleming, J. P. Plagemann, Simeon R. Winch and Chester C. Walton all had good work on exhibit, and Miss Breyman, whose work was not in competition. Hugo B. Goldsmith, of San Francisco, hung eight prints which were noncompetitive. They were up to the usual fine standard of the Goldsmith's and were mostly Chinese subjects. They added greatly to the general exhibit and were much appreciated by the committee. An unusually artistic catalogue had been gotten out, inclosed in an art poster cover. Handsome half-tone inserts were made of several of the prints on exhibition, and the general tone was high class. The Club was open to the public every afternoon and evening and every one was cordially invited to visit the exhibit and offer criticism on the work.

TIDE-LANDS
by MISS BERTHA BREYMAN
Oregon Camera Club

Why I Like Kodoid Plates

By Wm. S. Ritch

Mr. Ritch is the author of the new booklet just off the Kodak Press, entitled "Amateur Portraiture by Flashlight." No book of its kind has received so much flattering comment from the photographic press of the country for a number of years. It is believed that this favorable and widely popular introduction of Mr. Ritch to the amateur photographers will make the following brief note on a phase of his personal practice doubly interesting to our readers:

In the practice of home portraiture, making from one to five dozen negatives during a day, I have found Kodoid Plates such a time and labor-saver, besides giving such beautiful soft effects in the finished print, that I have written the following as the result of my experience, for the benefit of others who may not have tried them. In the first place five or six dozen Kodoid Plates can be carried about all day, with my other apparatus, with perfect ease, while the same number of glass plates would be quite a burden.

In developing I slip one plate into the developer, rock the tray a little until exposure is found to be about normal, turn the negative over, and let it develop face down, while another is slipped in to develop face up. Covering that tray with a board I place another tray on top and slip in two more negatives, finishing the whole four in from fifteen to twenty minutes. In fixing and washing I treat them the same as prints, putting as many as are wished in a large tray of hypo, and washing them in ten or twelve changes of water, thus making wash boxes and fixing boxes unnecessary.

I find the surface of Kodoid Plates much easier to retouch than the hard surface of glass plates, the texture being more like drawing-paper. Printing may be done from either side, making a reversed image if desired, or obtaining the correct picture in carbon with the single transfer. Best of all, the non-halation and orthochromatic properties of Kodoid Plates give the finished print a delicacy and softness beyond comparison with prints made from negatives on glass; especially is this so in subjects of much contrast.

Last but not least is the keeping and filing of negatives. How often have I hunted for a certain glass plate, looking through the whole batch to find it at the end. Perhaps others may keep their negatives filed and in order, but I never felt like spending my time that way. With Kodoid Plates I can put all of one subject in an envelope together, and while using for printing, etc., can lay them around anywhere without danger of scratching or breaking. After work is finished on them the envelopes can easily be put away and arranged alphabetically, as there are very few of them compared to glass plates, where each plate must be put in a separate cover.

On the whole, the non-halation and orthochromatic qualities of Kodoid Plates make them all that a plate should be, while the ease of keeping and filing the finished negative has saved me no end of trouble, to say nothing of the other advantages of light weight, fixing, washing and retouching. I have never yet scratched a Kodoid Plate.

CAMERA CRAFT

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Edited by FAYETTE J. CLUTE

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The Field for Photography

The average professional who sits in his place of business and grumbles because the income on his limited output does not pay him a handsome profit, should take a lesson from some of our hustling friends in the southern part of the State. In a neat folder which reached me this week they say: "Photographs Made for the Following Purposes." This is followed by a list which should interest a great number of possible customers. In this list, which is headed "Promotion of" is found: Mining, Irrigation, Cattle Raising, Land Sales, Industrial Enterprises, Legal Evidence, Structural Work, Catalogue Illustrating and Advertising Efforts. Not only are these claims made in the folder but the gentlemen are prepared to show samples and give reasons why their services should be secured. And further, they are not entirely satisfied to await such demands upon their resources. Their capabilities are brought to the notice of every prospective customer that they may find within their territory. I doubt if they are wasting much time in grumbling over their lack of reward.

New Models

CAMERA CRAFT is in a position to state definitely that decided improvements will be made all along the line of camera construction and this at no very future date. While the number of models will be somewhat curtailed, it will be only for the reason that the remaining ones will embody all the good features of the larger number. Complete in equipment and as nearly perfect as the present instruments are supposed to be, the manufacturers have found it possible to incorporate improvements that will make the new models for the coming year even more desirable than the most sanguine can expect. With each added improvement, with every increased convenience and with all argumentation of the possibilities placed at our disposal, our debt to the manufacturer is increased. I believe that we would all show more consistency were we to grumble less loudly and less long when our shutter sticks or some trifling matter goes wrong.

Some More Congratulations in Order

CAMERA CRAFT took occasion to congratulate its readers as well as itself, recently, on the fact that it published only original articles. CAMERA CRAFT has been led to follow this plan by the many letters of appreciation it has received from its discerning readers. This month we present several articles that are not only original in treatment but on subjects well-nigh original, although belonging strictly within the scope of a photographic magazine. Mr. Roloff's article fills a demand that has remained unsatisfied for years, as can be attested by our own letter files and the "Correspondent's Columns" of our contemporaries. This article is not vague and unsatisfactory. Neither is it reprinted from a foreign journal, making responsibility doubtful, but it is in Mr. Roloff's clear style, fully illustrated, and endorsed by his offer to give any further information that may be desired. Dr. Power's article, showing increased possibilities in pinhole work is as new as it is interesting. Mr. Zimmerman's article on Sepia paper is as valuable as it is exhaustive. Our report of the First American Salon by Mrs. Jeanne E. Bennett is perhaps the first appearance in print of this gifted artist of the lens, and will be all the more welcome by that large body of our readers who are familiar with and admirers of her work. Mr. Bartlett's article is decidedly in advance of the usual advice on the subject of artistic mounting. The difference between an intelligent understanding of the underlying principles and a blind following of the usual advice to try various combinations until one is found pleasing, can be appreciated by the most superficial reader. Other articles in this issue will help to prove that original matter and original treatment combine to make a publication more nearly satisfactory than even the most carefully selected aggregation of articles borrowed from other magazines.

"The Perkins' Press"

A handsome thirty-two-page booklet has reached me this week with the above title on the cover. The Perkins' Press comprises *The Tacoma Daily Ledger, The Tacoma Daily News, The Bellingham Daily Herald, The Olympia Daily Recorder* and *The Everett Daily Herald,* not forgetting the Tacoma Engraving Company. Both Mr. Perkins and his able assistant, Mr. Bryan, are personally known to the Editor of CAMERA CRAFT, and in commending the wonderful facilities they have placed in the hands of the general advertiser, I can do little more than say that the field which their several bright and progressive publications open up to the advertiser is one that should be promptly investigated. Their circulations are inviting and particularly so when it is remembered that a given circulation in this territory is worth more than a multiplied amount in that further east. They are earning the substantial support which is rewarding their enterprise and good business methods.

Mr. S. T. Oswald of Willis & Clements, Philadelphia, manufacturers of the famous W. & C. Platinotype papers, is spending the winter on the Pacific Coast. Mr. Oswald will be in San Francisco for the next thirty days, making his headquarters at Kirk, Geary & Company's, 112 Geary Street.

The Amateur and His Troubles

By Fayette J. Clute

This Department is especially intended to assist the beginners. However, many of the more experienced workers also make mistakes. All readers of Camera Craft *are invited to tell Mr. Clute their troubles. Address all communications to Fayette J. Clute, Editor of* Camera Craft, San Francisco, Cal.

Some Pleasing Pictures

One of the Camera Craft readers, Frank J. Stumm of Benicia, California, who has just returned from a tour of Germany has sent me a collection of fine little pictures made while in that country. His pictures depicting child life are very pleasing. One of them will be found reproduced on this page. He writes: "There are no children in the world more eager to pose for the benefit of an amateur photographer than those of the German peasantry. They know quite well that the amateur is in search of subjects that are new and novel, and they are ready with most original suggestions in that direction the moment they are assured that they are desired as subjects. Coming into a village near Bingen one morning, I stopped to inquire the way of a crowd of boys who were fishing near the road. I was at once recognized as an amateur photographer and immediately surrounded by the most eager lot of subjects for my camera that it had been my lot to encounter. I could not allow the opportunity of securing such an interesting group of youthful fishermen to be lost. Choosing the moment that seemed most vital, when all except the girl at the left and her charges in the ancient wagon were feeling most "natural," the exposure was made. A moment's delay and the effect would have been lost. My only regret is that I failed to secure the expectant face of the little girl who is approaching from the rear, which, unfortunately, is only partly visible.

GERMAN PEASANT CHILDREN — BY FRANK J. STUMM

About Lenses

And this week came a number of further questions about lenses. One of them was to decide an argument, and necessitated a very long letter which at best was not an answer to the question, because the question itself was vague. The most of those queries, however, were from photographers who seemed to think that if they can only find the right lens they can get the one instrument to answer all their purposes. This is a wrong idea. I know a gentleman who can show you good portraits made with a landscape lens, but he would never think of soliciting portrait work as a business without first investing in another instrument.

Another man can show you a landscape that has been hung at various salons, made with a portrait lens, but this same gentleman would never think of going a-field after landscape studies equipped with that lens alone. To come down to the matter in hand: A lens for landscape work should possess good depth of focus, and the older types from their roundness of field certainly do possess more depth, practically, when used on the average landscape that recedes in the center; it should be of a length of focus not less than the diagonal of the plate and even that is too short when the plate is used horizontally; and it should cover fully the plate so that it can be raised or lowered on the camera without failing in its work. The focal length of a portrait lens should be governed more by the size of the head than by the dimensions of the plate; there is not the same demand for good covering power, and depth of focus is not required. A group lens on the other hand is an entirely different matter. When we come to interiors it is evident that a still different form of lens must be used. Wide angle, truly rectilinear and with good depth of focus, the qualities that go to make a good instrument for interior work are not found combined in any other type of lenses. Again, the man who desires to do focal-plane shutter work finds his main requisite to be speed. Depth of focus he knows he must sacrifice, distortion due to too short a focal length he can overlook. His requirements demand one of the most rapid anastigmats of too short focus for the best portraiture and used at an aperture entirely useless in interiors or landscape work. But we are asked which is the nearest approach to an all-around lens. The all-around work of two different men will be found to differ. The portrait lens is perhaps the least useful outside of its own field. The wide-angle lens intended for interior work is the next least available. Good groups can be made with both a landscape lens and an anastigmat of not too short focus. The same can be said in regard to portraiture if we specify that the landscape lens is a rapid rectilinear of a good make, working at a large aperture. The same may be said of architectural work providing the rapid rectilinear is as specified, insuring the securing of rectilinearity of the lines. The field thus narrows down to these two types. The advantage lies with the anastigmat if one is selected with a focal length that is sufficient. The moment this is done, the price gives the advantage to the good instrument of the rapid rectilinear type. The safest counsel I can give is to convince yourselves that there is no lens that will fill all requirements. Learn the limitations of the instrument you possess and inasmuch as it may fall short in some particular line, purchase additional instruments for the work as your requirements demand.

Metol Poisoning

One of my correspondents in Kansas has just discovered that he is susceptible to metol poisoning. I sent him a rush letter, but for the sake of some other possible sufferer will give the remedy here. Before doing so I wish to say that only in rare cases does any trouble follow the use of this excellent developer. If you are one of the rare individuals who are susceptible there is nothing to fear for the reason that you will have fair warning and at most the trouble is but temporary. Some people are as easily affected by such a simple and every-day chemical as liquid ammonia or, as is a friend of mine, aniline blue. Others find no injurious effect following the use of a strong solution of any of them, or as a writer said in defence of metol a while ago, he had literally bathed in it. But the remedy; it is simply Resinol Ointment. It is a proprietary preparation that can be secured at any drug store. It relieves the intense itching almost instantly and if applied quite often, as it should be, it will prevent the skin coming off. For the information I am indebted to R. P. Daniel of San Antonio, Texas; a gentleman connected with a large hospital there, and one who has suffered from metol poisoning himself.

Safe Edge for Carbon Printing

Another inquiry concerning the making of a safe edge, tempts me to give my own practice in this matter. As I work constantly in carbon, I make my safe edge when I develop my plate. I have a piece of heavy glass covered with black paper a size smaller than the plate I am about to develop, which I superimpose on the latter, then I strike a match, hold it above the plate for a moment, and develop, and get my negative with a safe edge as a part of itself.

Club Notes

News Items From the Various Camera Clubs

By C. A. Goe

New Quarters

Probably the Directors of the Camera Club have never had a proposition quite as liberal and advantages as the one put before them by the Jefferson Square Club. The following extract from a recent circular will better explain the matter, and it is to be regretted that at the time of going to press we are unable to give the result of the vote of the members:

California Camera Club,

San Francisco,

December 12, 1904.

To the Members of the
California Camera Club:—

For a long time past our Board of Directors has considered the proposition of moving to more commodious quarters, and in this matter we have been prompted by the express wishes of a large portion of the active membership of the Club. Within the last few days a proposition has been submitted to the Board which we desire in turn to submit to the general membership. Desiring, in such an important matter, to defer to the opinion and judgment of the members, your Board at a special meeting resolved to bring this matter to your attention.

The premises to be occupied are the major portion of the third floor of the building on the southwest corner of Golden Gate Avenue and Octavia Street.

The proposition is presented to us in the following language:

"We are informed that the California Camera Club wish larger quarters, and believe we have just the place for you on our third floor, which will give you several times the space you now occupy, enabling you to arrange your various working rooms, offices and reception rooms more conveniently and to accommodate a much larger membership.

Our building (which is located on the southwest corner of Golden Gate Avenue and Octavia Street) is new and equipped with passenger and freight elevators, electric lights, steam heat and water, and faces the beautiful Jefferson Square, and has fine light, sun and fresh air. Under separate cover we are forwarding to you a floor plan prepared by some of your members, showing how the space could be arranged.

There will be an inside stairway connecting this floor with the second floor, where is located the Jefferson Square Club, which contains twelve bowling alleys, six billiard and pool tables, four shuffle-boards and other amusements. There are also a fine grill and bar on this floor. Your Club would have at its disposal all the privileges of the Jefferson Square Club.

Passenger elevator runs daily (including Sunday) from 8:30 A. M. until 12:00 P. M. Wide stairs from main entrance on Golden Gate Avenue and side stairs on Octavia Street. There is a heavy population surrounding this location, which should enable your Club to secure many new members.

The large hall (as shown in the drawing), 36x90, could be used for photographic, art and other exhibitions, dances, socials, musicales and other purposes. When not in use by the Club, it might be rented out, and quite a revenue derived in that way.

Our property is located practically in the center of the residence section of the city, and is only a short ride from the business portion of town. Car lines are very convenient."

A blue print showing a suggested plan of arranging the floor space will be found on the bulletin board at the Club rooms.

We enclose herewith a postal card. Indicate thereon your opinion by crossing out either the word "For" or "Against."

A. L. Coombs.
President.

W. E. Dassonville.
Secretary.

Monthly Exhibition

On Friday evening, December 16th, Professor T. J. Alley, explorer and adventurer, delivered a lecture on one of his journeys "Through Wildest Arabia." As usual the audience was made up of about two thousand of the friends of the Club members.

Christmas Tree

Santa Claus will call at the Club to distribute his presents to the members this year a little ahead of his usual time, viz: Thursday, December 22d. He will be pleased to meet all his friends, and the many surprises he has in store for them will more than repay them for being present. Santa Claus will be pleased to distribute any presents left at the Club. The Entertainment Committee have arranged an interesting program for the occasion.

The First American Salon

The San Francisco members of the Salon Committee of the American Federation, were successful in getting a liberal number of pictures for the First American Salon. We are now in receipt of the catalogue and find that out of three hundred and seventy-eight pictures selected by the Jury, fifty-four were sent from the Pacific Coast, representing twenty-five out of twenty-nine who contributed their work to the Pacific Coast Committee of the Federation.

When it is known that nearly ten thousand pictures were placed before the Jury the showing made by the Western workers certainly is far better than that of any other section of the country, and the Salon Committee feel very highly elated at the success met with by those who contributed so handsomely. Fifty-four pictures accepted out of a total of two hundred and twenty-four sent is certainly a most creditable showing. Particularly is this the case when it is remembered that this shipment came before the most exacting Jury, which assembled at the second day's judging.

Below is given a list of those whose pictures were accepted, with the number of frames hung:

1, Laura Adams Armer, Oakland.
2, O. M. Ash, Portland.
2, F. M. Braddock, Stockton.
1, Bertha Breyman, Portland.
1, Elizabeth Burton, Santa Barbara.
2, Fayette J. Clute, San Francisco.
3, W. E. Dassonville, San Francisco.
2, John T. Diebels, San Francisco.
2, Helen P. Gatch, Salem.
2, Arnold Genthe, San Francisco.
1, Adelaide Hanscom, San Francisco.
1, George F. Holman, Portland.
4, Herman S. Hoyt, San Francisco.
2, L. M. Kaiser, San Francisco.
3, Edward H. Kemp, San Francisco.
4, Oscar Maurer, San Francisco.
2, F. E. Monteverde, San Francisco.
1, W. J. Piatt, San Francisco.
1, Herbert G. Ponting, Berkeley.
4, Hana Robison, Berkeley.
2, Walter A. Scott, San Francisco.
5, E. N. Sewell, San Francisco.
2, W. J. Street, San Francisco.
3, Charles E. Townsend, Oakland.
1, Cora T. and Will H. Walker, Portland.

The Brooklyn Camera Club

The annual exhibition of the Brooklyn Camera Club will take place February 16th, 17th and 18th, 1905. This will be an open competition and all photographers are invited to send some of their work. Entries must be in by February 4th, 1905. Further information can be had by addressing C. M. Shipman, 776 Manhattan Avenue, Brooklyn, New York.

Mr. Kemp's Demonstration

The demonstration given before the California Camera Club on the evening of November 22d, by Edward H. Kemp was one of the best with which the Club has been favored in a long time. A number of negatives handed in by the members were most successfully treated during the evening, interest being maintained until a late hour. Mr. Kemp has been urged to prepare this lecture separate from the demonstration, for the pages of Camera Craft. It will no doubt appear in the next issue.

With The Process Workers

By Will Sparks

In this Department questions addressed to Camera Craft, *regarding photo-engraving, will be answered with care. Due research will be made wherever it is necessary for a correct answer. The experiences of printers and engravers are requested, and any suggestions will be gladly received. An effort will be made to supply the best information obtainable regarding the working and development of the three-color process. If you have any unusual experience with your work or have trouble with your chemicals, write to The Process Worker,* Camera Craft.

Screens for Color Work

Max Levy in the *American Annual of Photography* gives some interesting facts about screens for three-color work. He thinks that the pair of screens ruled at the proper angles for the work will give place to the circular screen. He says:

"The advantages offered by a screen of circular form have stimulated the efforts to minimize the disadvantages which have been found to attend this form of screen. Only two objections have been urged against the circular screen: one, the difficulty of turning in the holder or camera, which is purely mechanical and can readily be overcome, and when overcome in the manner shown below, affords a further advantage over any other existing method in the complete protection of the screen from the silver solution and the large measure of further protection from accidental injury through jar or other causes. I have recently designed an arrangement and constructed a lathe for turning the aluminum rings up to seventy-two inches in diameter. In this arrangement the screen is carefully fitted and cemented into a ring turned from an aluminum casting, and this ring is arranged to rotate upon two friction rollers and a friction clamp, all of which are mounted upon a framework carefully built up of sheet aluminum and properly braced. The ring is graduated half way around, the gradations being fifteen degrees apart, and a pointer is mounted upon the framework by which the angle is read off. The direction of the rulings is carefully marked upon the screen, and one of these rulings is made to conform to 0 degrees and 180 degrees on the circular frame. A screen forty inches in diameter, made for my exhibit at the Louisiana Purchase Exposition (St. Louis, 1904), is mounted in this manner and moves with the greatest possible freedom and precision, so that in using such a screen there need be no fear whatever of any error in the angle of the rulings in resulting plates.

"I shall now take up briefly the chief obstacle in the way of the use of the circular screen; this is the extra large size of camera and plate-holder required. The effect of this disadvantage is reduced by placing the screen in the camera instead of in the holder, the former being the English and Continental, the latter the American practice. I am able to say at this time that the difficulty is substantially if not entirely removed by an ingenious contrivance I have seen, in which a plate-holder of the normal size for the required plate is employed in connection with a circular screen and framework considerably larger, the screen and framework being mounted in the back of the camera, with ample provision for cleaning the screen without removing it from the camera. I am unable to give full particulars of this device, as the inventor is not yet ready for publication."

Cleaning the Half-Tone Plate

When an enameled half-tone plate is etched, it is customary to fill the etched parts with magnesia to learn the state of the plate. This dispenses with proof-pulling. When re-etching is done, the magnesia, though not interfering with the mordant, combines with the perchloride of iron to make a solid substance which is difficult to remove even with a stiff brush. It can be removed by laying the half-tone plate in a weak nitric acid bath for a few minutes and then holding the plate under the tap. *Process Work* has asked for suggestions to remove this hardened magnesia and here are a few of the replies: W. H. Blundell uses a dram each of chromic and sulphuric acids in 20 ounces of water. H. E. Tilyard recommends 10 ounces of hydrochloric acid and 2 ounces of salt in 20 ounces of water. F. Dugmore warms the plate and uses a warm solution of acetic acid. Burman Norton applies liquid ammonia to the plate and uses a stiff brush each way with the ruling. W. B. Law finds that using prepared chalk instead of magnesia he has no trouble in dissolving the chalk in the acid. A. Jinks adds 8 ounces of methylated alcohol to 3 ounces of hydrochloric acid and 6 ounces of common salt in 8 ounces of water and brushes lightly with the screen grain. A. J. Newton, of the Bolt School, says the chromic sulphuric acid solution is the one they use as an opening bath if the plate appears a little scummy, and the same solution afterward to clean the magnesium out of the plate.

Newspaper Cuts

The following, from an article by Robert E. M. Bain, gives a good idea of the actual requirements of newspaper pictures:

"Newspaper work is in a class all its own. It does not deal with fine negative work, nor, in any degree, whatever, with art. The whole is subservient to news-interests only. The pictures should have "snap" and life, and pertain to live issues in which the public is particularly interested. Of street scenes, portraits of public speakers of note delivering addresses, war scenes and other work of a similar character, the photographer must catch his subject as he finds it and cannot wait for conditions which would enhance the pictorial effect. Light and shade, conditions of sunlight, time of day, background, accessories and other details of that character are not to be considered save as they appear of themselves. The whole thought of the operator is to get the particular view under whatever conditions present themselves. This will account for the crude appearance of many of the portraits and views seen in the public press."

Saving Silver

Many photo-engravers send their old silver waste to the refinery to be separated and fused. This of course, is effective, but it is expensive. Here is a simple method by which any photo-engraver can refine his own silver and get all the money that is coming to him: After collecting all the waste silver products in the shape of films, ashes, blotters, etc., put them into a granite-ware kettle and cover with hydrochloric acid. Then add an equal quantity of sulphuric acid. This will cause heat and a bad smell, but stir it well with a glass rod, pour into a glass jar and allow it to stand. It will divide into three sections. A heavy deposit will go to the bottom; on top there will be a thick scum and in between a comparatively clear fluid. Throw away the scum and the clear fluid and set the residue out to dry. Then mix it with five parts of charcoal (by weight), and seventy parts of sawdust. Now put it into a crucible and set in the stove where it will keep red hot for half an hour or so. You will find a button of silver in the bottom of the crucible that can be quickly converted into cash.

The New Enclosed Arc Lamps

Great satisfaction is being expressed by the users of the new enclosed arc, or vacuum, lamps for photo-engravers. Several of these lamps have recently been installed here and are working with perfection. They use less current, burn less carbon and make the exposure in half the time usually required by the ordinary arc lamp. As these lamps burn in a partial vacuum they emit few hydrogen rays, which border on the yellow, but nearly all of the ultra violet which have greater actinic power on the plate than any other.

Answer to Query

J. D. Miller, Oakland: From your description I think your trouble is caused by overexposure. Do the work with as little time as possible and the result will be clear.

A Photographic Digest

By H. D'Arcy Power, M.D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., 114 Geary Street, San Francisco, California. The Files of the Digest Department contain practically a complete set of Foreign photographic publications. These are open to Camera Craft *readers for reference or loan.*

What Are the Limits of Orthochromatism?

A few months ago a writer in *Photography* started a discussion on the above question by challenging the exuberant statements of the venders of orthochromatic plates and many of their backers. In the discussion that followed I took a part and presented a view of the subject that so far as I know has not received attention, and which I now reproduce for the consideration of American readers. The following is an extract from my letter to *Photography:*

"There is one aspect of orthochromatism that so far as my reading goes, has altogether escaped the consideration of writers, namely, the contention that I now make that in a large number of cases orthochromatism is undesirable. The object of orthochromatic rendering is to obtain true values, and the idea expressed, or underlying most writings thereon is that the nearer the plate comes to rendering the values truly, the better will be the representation of the subject. But this is often an entire mistake, as I will proceed to show.

"By values is meant the relative light intensities of an object as measured by the eye, and independently of color. Thus, two strongly contrasting colors may have the same value, that is, look equally light, or equally dark, and if expressed in black and white they would demand the same shade of gray for their true expression. But if such colors were in juxtaposition no artist in black and white would ever dream of so rendering them. He would sacrifice their values to preserve their contrast.

"Let us take an easily comprehended example: Ask an artist with an approved sense of color to paint a yellow cross on a purple shield, using for the purpose tints of the same value. The contrast between the cross and its background would be startling. Now, let ideal orthochromatism do its best with this subject. The values of the yellow and the purple being exactly alike, and truly rendered, would affect the plate precisely to the same extent, and there would result a uniform gray image without a sign of a cross thereon. This is the *reductio ad absurdum* that awaits the application of perfect orthochromatism to the rendering of colors in monochrome.

"Now let us ask what the black and white artist would do with the example given, and the answer is: He would falsify the values until by rendering one color lighter and the other darker than it is, he would attain the sense of contrast which the colors, not the values, afford the eye. It should be distinctly recognized that what the eye chiefly appreciates in nature is contrast. This contrast may be either of color, or of light and shade, and when these contrasts are to be rendered in black and white it is just as necessary to preserve a color contrast as it is to preserve those of light and shade. They may go hand in hand, but quite often they do not, and then the nearest approximation to truth is obtained by sacrifice of values.

"I am not writing against the use of orthochromatic plates. Their good qualities are most valuable, and appreciating the fact, I am never without them. Nevertheless, it is quite wrong to imagine that they are always better than the ordinary kind. When the contrasts of the subject to be photographed are dependent on colors of near values, their use may be detrimental. I believe this last is often the case, and the

refusal of many eminent photographers and pictorialists to adopt generally the orthochromatic variety is not without its justification."

Antidotes for Poisons

Following are the latest means of neutralizing poisonous doses of certain chemicals that the photo-engraver is likely to get into his system. It will be well to remember them. Iodine: Three grains may prove fatal. Strong emetic at once (mustard is the best for this), then follow with small doses of starch. Mercury: Nothing is better than to get an egg from the printing-room, beat it up and give to patient. Nitric Acid: Two drams of this will generally prove fatal. If patient has not had too much, knock some of the plaster from the wall, mix it with water and make him swallow it. But be quick, as every second counts. Nitrate of Silver: Common salt is as good as anything. Bichromate of Potash: Should any of this get into a cut and cause a burning sensation pour some of the iron solution over it. Should it be swallowed give an emetic. Cyanide of Potash: Generally there is nothing more to do than to send for the Coroner, but some patients have been saved by giving them an emetic and keeping their heads and necks covered with chopped ice.

Photographing the Unseen

Apollo announces that according to information received, Professor Karl Zenger of Prague has succeeded in producing a collodion plate that, treated in a special manner with a preparation of uranium, has a remarkable sensibility in recording the invisible in stellar photography and the like. Most extraordinary developments are expected to follow fuller investigation of the possibilities of the process. The publication of full details is promised to follow.

A New Method of Intensification and Reduction

Last March J. S. Teape read a paper before a London photographic society on a method of intensification, a method which had previously been only partially developed, but one that was certainly new to the mass of photographers who were present. The paper seems to have attracted little attention until C. W. Sommerville took it up in the *English Amateur Photographer* of July, giving further details, the result of his own investigation. Since then C. Welborne Piper and D. J. Carnegie have published a paper on the same process, speaking of it as "our process," although publishing it six months after the original lecture by Mr. Teape. However, be the credit due to whom it may, the process is undoubtedly the most valuable method of intensification that has ever been described. Briefly, the negative or bromide print is first bleached in a solution of potassium bichromate and hydrochloric acid, two to five per cent of the first and one per cent of the latter. The bleaching solution is then thoroughly removed by washing, and after a moment's exposure to strong light, the image is redeveloped with an ordinary developer. The intensification obtained is quite considerable, the image is free from stain, retaining its previous gradations, and consists solely of the original silver of the primary image. I have used the process very extensively for the past three months with unvarying success, and am investigating the nature of the remarkable change effected. The result of these studies together with some new applications of the process, I hope to place before you very shortly.

Printing in Silver and Gum

I have kept pretty close tab on the various modifications of gum printing in these pages. The following method published by Dr. Reiss in the *Revue Suisse de Photographie* is not to be included therein as it is not based on the action of bichromates on gum, nor does it contain solid pigment, nor can it well be capable of the free modification that gives value to gum-bichromate methods. In Dr. Reiss's process the paper is coated with a mixture of gum and silver nitrate, when dry it is printed, washed and fixed in hypo (two per cent), washed and toned. The coating mixture is made by working together in a mortar 5 c.c. of a 50 per cent solution of gum and 3 c.c. of glacial acetic acid, to this is added 1 gram of silver nitrate in 3 c.c. of water and the mixture put on the paper with a hog's-hair brush.

Blue-Toned Bromides

Professor Namias has an article on this subject in the current *Revue Suisse*. It is well known, he says, that a solution of molybdic acid treated with a reducer assumes a fine blue color. If an excess of an alkaline sulphite is added to a solution of molybdic acid with nitric or hydrochloric acid, the

liquid gradually turns blue, especially when exposed to light. A bromide print immersed in such a solution becomes little by little blue in color, feeble enough at first, but of an intense tint in ten or fifteen minutes. The print subsequently washed and dried has a deep blue color, which Professor Namias says is more agreeable than that which can be obtained by means of the ferric processes. It is at the same time slightly intensified. A good formula which he recommends is as follows: Twelve grains of molybdic acid are dissolved in half a dram of strong ammonia, and half a dram of water. A dram of nitric acid and a dram of water are added thereto, and the mixture forms the stock solution which keeps indefinitely. Immediately before use, a dram of this solution is diluted with three drams of water in which twelve grains of potassium metabisulphite have been dissolved. In this solution the print that is to be toned is immersed, preferably after having been soaked in water, and it is left therein until the desired color is reached.—*Photography.*

On Quinoline Red as a Preservative to Color Sensitive Plates

Various sensitizers for red sensitive plates suffer from disability in that they cause fogging and spottiness. This tendency can be lessened by the addition of other dyestuffs that are not themselves sensitizers, and among them quinoline red has recently been the subject of investigation by Dr. Miethe who published his results in the *Zeitschrift für Wissenschaftliche Photographie.* He finds that it acts thus with methyl red and ethylred nitrates as well as with orthochrome and König's pinachrome, and that plates which would otherwise be foggy, spotty and striped appear perfectly clear. As a working formula he gives the following examples:

Ethylcyanine nitrate (1-1000 + alcohol)	10 c.c.
Quinoline red (1-1000 + alcohol)	50 c.c.
Water	500 c.c.
Ammonia	3 c.c.

Self-Luminous Photographs

The *Photographische Mittheilungen* (No. 7) gives the following directions for the making of plates or paper that after printing give pictures luminous in the dark: Ten grams of pure gelatine are dissolved in 50 c.c. of water and thereto is added 1 c.c. of glycerine and 30 grams of Balmain's luminous paint. This latter substance is an article of commerce and consists of calcium sulphide 1 part, sodium hyposulphite 1 part and bismuth oxide 0.003 of a part. The paper is coated with the warm emulsion in the usual manner.

To obtain a luminous picture the plate or paper coated as above is exposed under a transparency for a few minutes to sunlight. If a negative is used the luminous image will be negative in character. Advantage has been taken of this to duplicate negatives. Such a luminous negative print placed in contact with a dry plate in the printing-frame for a space of thirty seconds will on developing the latter give a new negative.

Clouds in Carbon Prints

Recently an inquirer in the pages of *Photography* asked for a means of printing in clouds in carbon prints, to which, after giving the usual method, the journal added the following excellent directions:

"Our own practice is to dispense with the masks by a method of working we have previously described. The landscape print is exposed, developed, and dried in the ordinary manner. The exposure is then made upon a second piece of carbon tissue, the lower edge being very roughly vignetted. The exposure must, however, be as short as may be compatible with getting a developable image. This piece of tissue is then squeegeed on top of the landscape print, and on development, which should be conducted in water at a very moderate temperature, it will be found that part of the sky print has overlapped the landscape portion.

"As, however, the gelatine is, by reason of the short exposure, in a very soluble condition, it is easily removed from the parts where it is not needed. The simplest plan is to lay the print in a dish of cold water and to remove the unnecessary parts of the image with a camel's-hair brush. An alternative method is to place the print on a sheet of glass and to use an artist's spray bottle to remove the pigmented gelatine. There is no risk of injuring the landscape image, as that has become insoluble by the alum bath through which it has passed.

"A sky, printed in in this manner, looks much more in harmony with nature than when it has been vignetted off by the ordinary methods, leaving a more or less wide band of white between it and the landscape."

Notes and Comment

Self-propelled Vehicles

A practical treatise with illustrations, by J. E. Homans, A. M., 8vo, pp. 672, bound in black vellum, gilt top, gold titles. Theo. Audel & Co., Educational Booksellers, New York, $2.

There is a vast amount of useful information packed into its 644 pages, and it is so well arranged and so clearly stated that the reader cannot fail to find and comprehend.

The general principles of automobile construction and operation, including steering devices, underframes, wheels, tires, bearings, lubricators are included in the opening chapters. Then follows an exhaustive account of the theory, construction and operation of gas engines, occupying over 100 pages. Several typical engines are taken up and discussed separately, and their properties, as regards balance, speed and power, are discussed in the light of fundamental principles. The explanations of the governing devices are clear and valuable, while the discussion of ignition, including the hot-tube, and the primary and secondary sparks, cannot fail to prove of the utmost value.

All necessary information is given, and the merits of several types of steam carriage are fully set forth.

New Series of Cooke Lenses

These new Series II and Series IV, Cooke Anastigmats, are designed for high-speed photography, for the finest portraiture, and for difficult photographs in poor lights.

The Cooke lens has the advantage of an extremely simple construction. It consists of three thin glasses which obviously admit more light than does a combination of six, eight or nine. The difference in lighting is distinctly noticeable in practice, and we invite fair comparison between Cooke lenses and others of the same focus and aperture. We have a delicate screw-adjustment for our final corrections of the lens. Sensitive and efficient, the adjustment always remains rigid, and besides increasing accuracy, it is immensely more durable than the old-fashioned balsam, with no disadvantage of any kind. With its help we can secure the most critical definition throughout the plate for which each lens is listed, and can attain one uniform excellence.

These advantages are fully developed in the new series, and result in objectives of greater rapidity and defining power, with a more uniform excellence than has hitherto been possible in lenses having these large apertures. The lenses numbered 22 and 23 in the Series II, excel for portraiture by the adjustability of the back glass. This enables the photographer to secure at will uniform sharp definition, or to diffuse any required softness evenly throughout the plate. The value of this device can best be appreciated by the professional photographer.

Amateur Portraiture by Flashlight

The above is the title of a most valuable and timely little book recently from the Kodak Press. It is written by William S. Ritch, a gentleman thoroughly conversant with the subject of which he treats. He not only understands fully the difficulties attending the successful production of good portraits by flashlight, using only the ordinary equipment of the amateur, but possesses as well a happy facility of imparting his knowledge to others in a plain and convincing manner. The book contains numerous illustrations and diagrams and is handsomely printed. Kodak dealers all have a supply, or one can be obtained directly from the Eastman Kodak Company, Rochester, New York, by enclosing ten cents with your request.

We understand that the Kodak Press is about to issue a little volume entitled "Book of the £1,000 Kodak Exhibition" in which will be reproduced some sixty pictures from among the best shown at the recent Kodak Exhibition in London. A copy may be had at 25 cents, either from the Kodak dealer or from the Eastman Kodak Co.

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A PHOTOGRAPHIC MONTHLY
114 Geary Street, San Francisco

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Wanted—To buy or lease, small studio near San Francisco. Address X. Y. Z., care CAMERA CRAFT.

For Sale—First-class studio in San Diego at a bargain. If you have $500, write Gordon & Goodwin. 1202 Fourth St., San Diego, Cal.

Scenic Backgrounds for 1905—Packard Brothers, Boston, Mass. The oldest established house in America. Mammoth illustrated Catalogue free.

For Sale—5x7 Premo box with Zeiss convertible anastigmat lens. Series 7A, cost $128. Perfect condition. Will sell for $60 cash. Address L. J. P., care CAMERA CRAFT.

Wanted—Good retoucher wants to go to warmer climate, would like piece work to do. If you have enough to keep one busy part of the time, write, F. Berryman, Superior, Wisconsin.

Wanted—Every amateur reader of CAMERA CRAFT to enter our $435 Contest. It is free. Write for full particulars. Contest Department, California College of Photography, Palo Alto, Cal.

Two hundred and fifty-six unmounted views of the Philippines; size 5x7; no two alike; packed in case ready to mail, $3. J. D. Givins, photographer, 2026 Green St., San Francisco, Cal.

33 1-3 per cent discount on 1904 cameras. Send stamp for greatest bargain list yet published; 20 to 60 per cent saved on supplies. Broadway Camera Exchange, 621 Broadway, New York.

Wanted—Amateurs having cameras (not kodaks), 4x5, or any size larger, can earn $5.00 per week by taking pictures for us at home. Send stamp for particulars. Oval Portrait Company, Caxton Building, Chicago.

For Sale—The only gallery in county-seat, 3,000 inhabitants, good business, good prices; building lot and all, $1,500. Speak quick if you want a genuine bargain; other business more important to me. Address Box 283, Merced, California.

For Sale—The oldest and best equipped studio in Denver, Colorado. Established 25 years, good location, low rent, steam heat, elevator, everything modern. Unequaled climate, particularly for weak lungs. Will be sold at a bargain. A. E. Rinehart, 1630 Arapahoe St., Denver, Colorado.

For Sale—$150 buys a photograph business, established two years. The price includes an 8x10 camera and lens, a 5x7 multiplying stamp outfit with two lenses and the entire studio outfit. Located in Everett, Wash., a city of 20,000 inhabitants. Address B. O. Walker, 2004 Hewitt Avenue, Everett, Wash.

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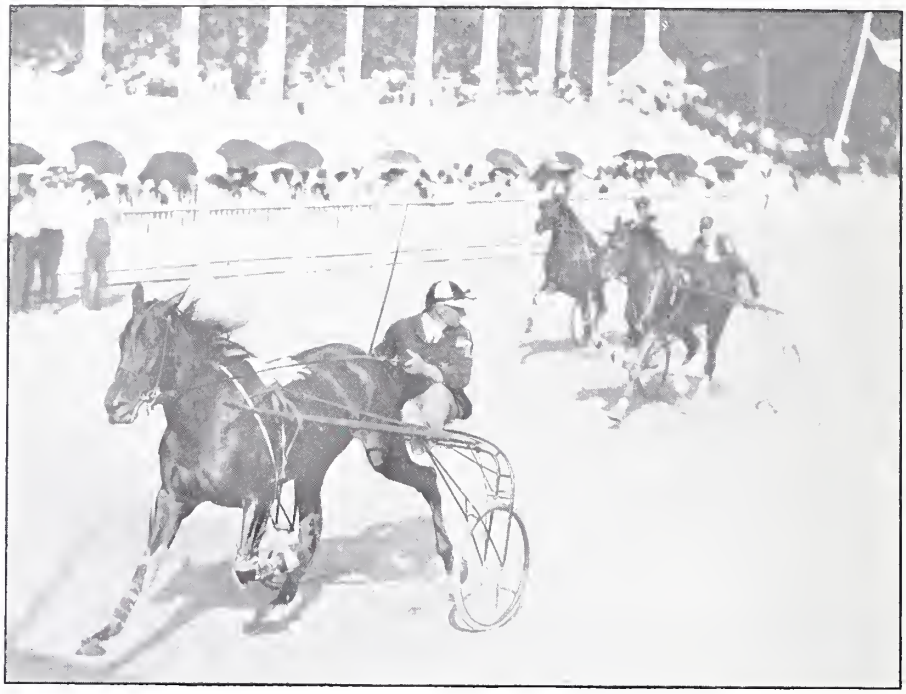

N. C. Film. 1/600 Sec. Stop *f*. 6.8. Leonard B. Robinson.

"IOWA" WINNING A HEAT IN 2:10¼.

TOO FAST FOR IOWA.

N. C. Film Catches the Famous Pacer in $\frac{1}{600}$ of a Second.

Evidence of the *quality* of N. C. Film and of the perfect working of the Developing Machine has been coming in very rapidly of late, but we have never harped very much on the extreme speed of our film because we believe that speed is not the first desideratum in film or plate. A letter and photograph received from Mr. Leonard B. Robinson of Sioux City, Iowa, covering the speed question are both so good, however, that we feel that everyone who is interested in photography should have the benefit of them.

THE LETTER.

Sioux City, Ia., Oct. 7, 1904.

Eastman Kodak Company,

Gentlemen:—

Like many other amateurs I have long used the Eastman roll films for ordinary work. Last month a big fair was held at Sioux City and races were given on the fastest track in the West, and one of the acknowledged best in the country.

I wished to make a large number of negatives of these races and had not enough holders for dry plates. I therefore determined to see if I could not use my roll-holder and film, and get passable results. I could carry plenty of rolls and develop them in the Kodak Developing Machine and hoped the convenience of using such material would compensate for not using the most rapid dry plates on the market.

I am sending you by this mail an 8 x 10 Bromide enlargement of one of my nega-

tives made as above, full data being written on the back. The original negatives are all 4 x 5, and while I believe this one to be a jewel in the way of high speed work, I have nearly a hundred others just as perfect.

This is another argument for your developing machine and is certainly proof of the extreme rapidity of your film. Recollect the lens worked only at *f.* 6.8.

Very truly yours,
LEONARD B. ROBINSON.

In addition to the data given in the letter Mr. Robinson gives the following facts:

"Iowa," pacer, property of H. Woods, Eldon, Ia., winning a heat in 2:10¼ at Sioux City, Sept. 9, 1904. Eastman N. C. Film, lens *f.* 6.8, exposure $\frac{1}{600}$ second. Machine Developed Negative. Print enlarged on Eastman's Platino.

He pertinently concludes the data with the question:

Is Eastman Film Fast?

ANOTHER GREAT VICTORY IN MANCHURIA.

In the Nov. 5th number of Collier's Weekly appears Frederick Palmer's account of the fighting at Liao-Yang, which he characterizes as the "Greatest Battle Since Gettysburg." The story of the battle is superbly illustrated by photographs taken by Collier's War Photographer, James H. Hare, and every one of them was made with a Kodak and the Kodak Developing Machine. On another page we give a reproduction from one of them showing Mr. Hare in company with a Japanese officer.

The success which the Kodak has achieved at the front would have been remarkable under any circumstances, but it is the more marked from the fact that many plate cameras were taken to the front—or as near to the front as they could be carried—yet practically all of the really important pictures which have been published, are from Kodak negatives.

To this fact we have the testimony of an array of brilliant correspondents and enterprising publishers. The new facts that are coming out almost daily show the exceptional reliability of the Kodak—its adaptation to work of the most important character.

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A clever photographer may make a good picture with a rickety camera and an inferior lens or even with no lens at all; he may sometimes hit it luckily and make an "artistic" print on a poor piece of photographic paper—but when it comes to making lantern slides the quality must be upon the glass or his task is hopeless.

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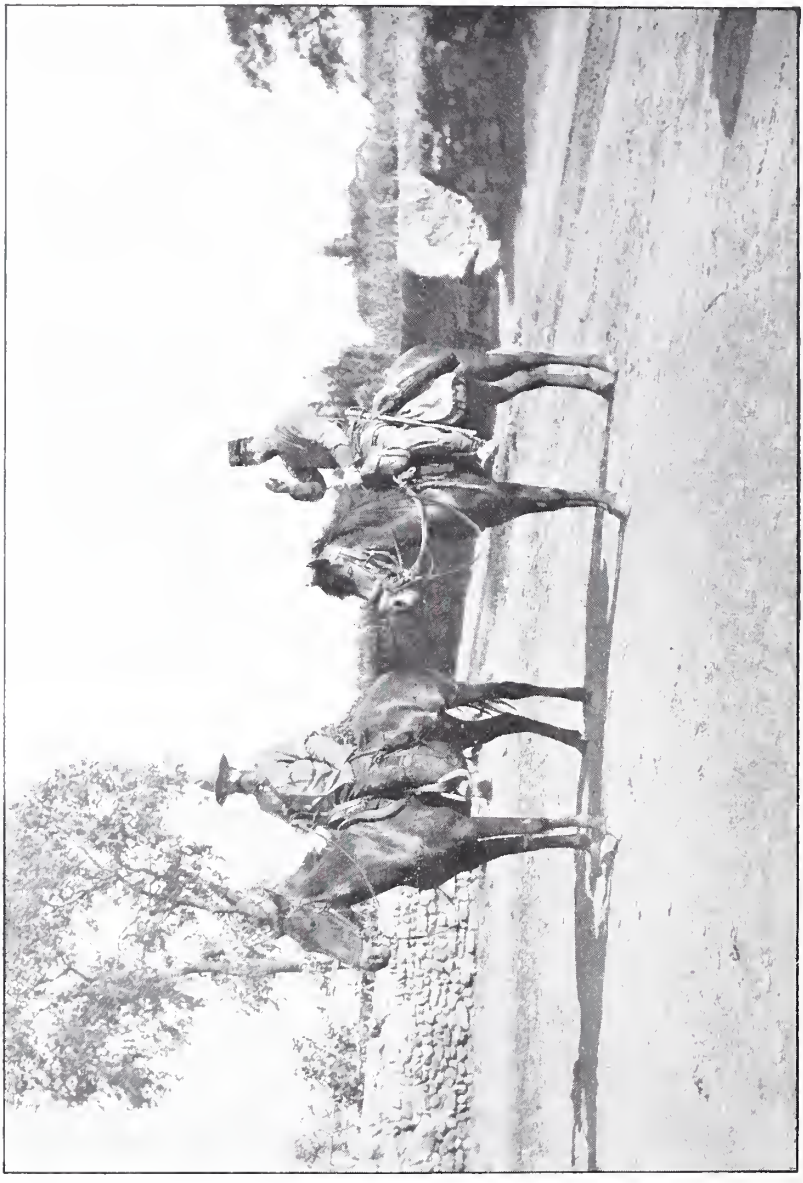

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James H. Hare, Collier's War-Photographer with the Main Division of the Japanese Army, whose Machine Developed Kodak Pictures have so fully portrayed the tragic scenes around Liao-Yang.

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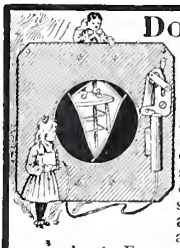

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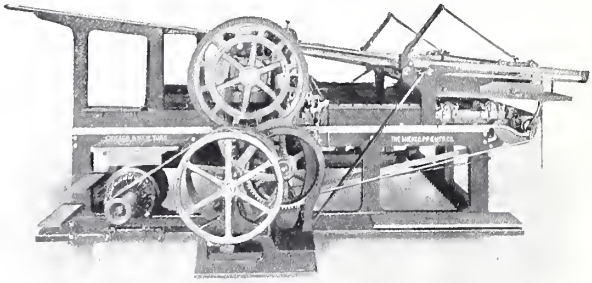

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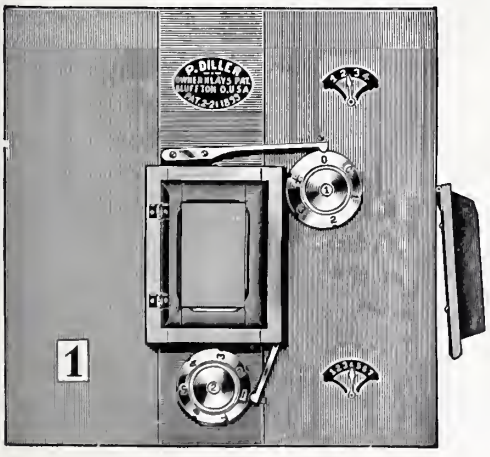

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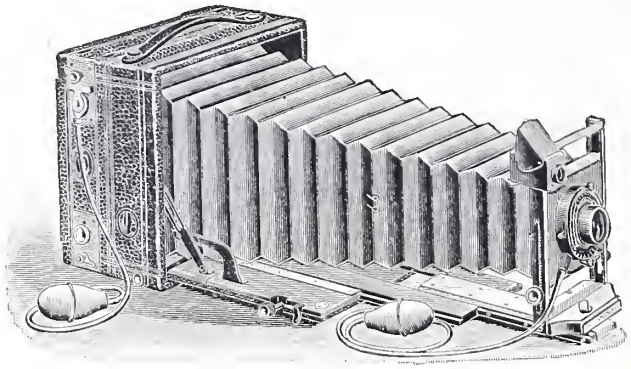

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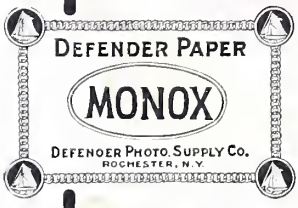

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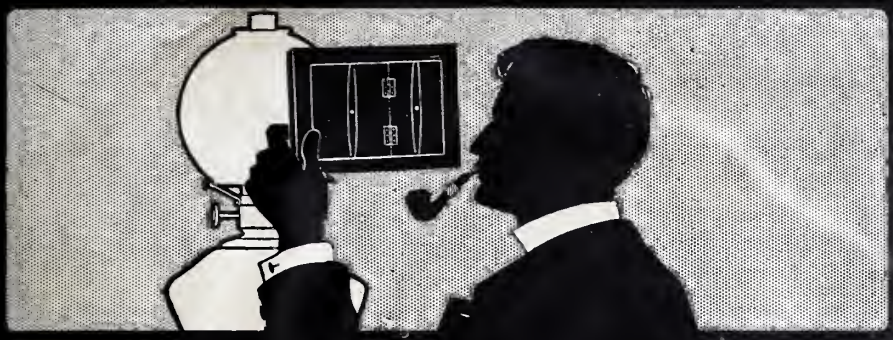

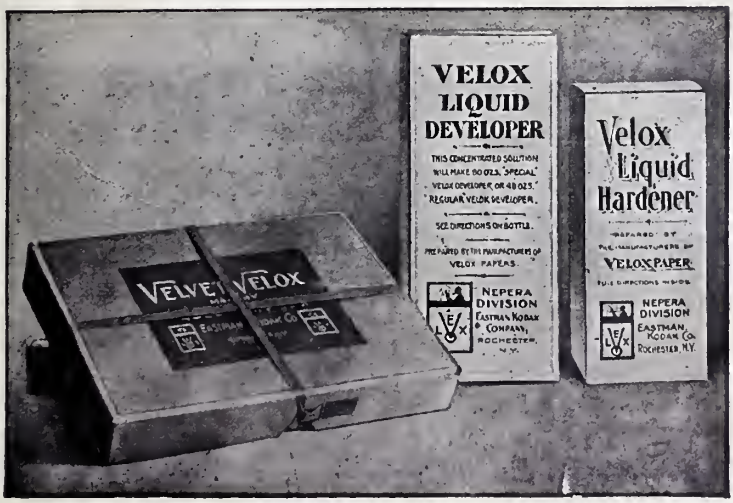
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